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<212> PRT

<213> Homo sapiens

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&lt;210&gt; 3888

&lt;211&gt; 1230

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&lt;213&gt; Homo sapiens

&lt;400&gt; 3888

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 Val Glu Asn Ile Trp Ala Leu Leu Leu Lys His Cys Glu Cys Ala Glu  
 930                      935                      940  
 Glu Gly Thr Arg Asn Val Val Ala Glu Cys Leu Gly Lys Leu Thr Leu  
 945                      950                      955                      960  
 Ile Asp Pro Glu Thr Leu Leu Pro Arg Leu Lys Gly Tyr Leu Ile Ser  
 965                      970                      975  
 Gly Ser Ser Tyr Ala Arg Ser Ser Val Thr Ala Val Lys Phe Thr  
 980                      985                      990  
 Ile Ser Asp His Pro Gln Pro Ile Asp Pro Leu Leu Lys Asn Cys Ile  
 995                      1000                      1005  
 Gly Asp Phe Leu Lys Thr Leu Glu Asp Pro Asp Leu Asn Val Arg Arg  
 1010                      1015                      1020  
 Val Ala Leu Val Thr Phe Asn Ser Ala Ala His Asn Lys Pro Ser Leu

1025                      1030                      1035                      1040  
 Ile Arg Asp Leu Leu Asp Thr Val Leu Pro His Leu Tyr Asn Glu Thr  
                                  1045                      1050                      1055  
 Lys Val Arg Lys Glu Leu Ile Arg Glu Val Glu Met Gly Pro Phe Lys  
                                  1060                      1065                      1070  
 His Thr Val Asp Asp Gly Leu Asp Ile Arg Lys Ala Ala Phe Glu Cys  
                                  1075                      1080                      1085  
 Met Tyr Thr Leu Leu Asp Ser Cys Leu Asp Arg Leu Asp Ile Phe Glu  
                                  1090                      1095                      1100  
 Phe Leu Asn His Val Glu Asp Gly Leu Lys Asp His Tyr Asp Ile Lys  
 1105                      1110                      1115                      1120  
 Met Leu Thr Phe Leu Met Leu Val Arg Leu Ser Thr Leu Cys Pro Ser  
                                  1125                      1130                      1135  
 Ala Val Leu Gln Arg Leu Asp Arg Leu Val Glu Pro Leu Arg Ala Thr  
                                  1140                      1145                      1150  
 Cys Thr Thr Lys Val Lys Ala Asn Ser Val Lys Gln Glu Phe Glu Lys  
                                  1155                      1160                      1165  
 Gln Asp Glu Leu Lys Arg Ser Ala Met Arg Ala Val Ala Ala Leu Leu  
                                  1170                      1175                      1180  
 Thr Ile Pro Glu Ala Glu Lys Ser Pro Leu Met Ser Glu Phe Gln Ser  
 1185                      1190                      1195                      1200  
 Gln Ile Ser Ser Asn Pro Glu Leu Ala Ala Ile Phe Glu Ser Ile Gln  
                                  1205                      1210                      1215  
 Lys Asp Ser Ser Thr Asn Leu Glu Ser Met Asp Thr Ser  
                                  1220                      1225                      1230

&lt;210&gt; 3889

&lt;211&gt; 556

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3889

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 180  
 cttattaagg gagatggcga ggtcctagag gaaatcgtaa ccaaagaacg acacagagag  
 240  
 atcaacaagc aagccacccg aggggactgc ctggccttcc agatgcgagc tgggttgctt  
 300  
 ccctgagggc ccccgctggc caaggcctgt ggacgacgct ggcggcccag cctgggcagg  
 360  
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 420  
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 556

&lt;210&gt; 3890

<211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 3890  
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 Glu Glu Asp Gly Pro Val Leu Thr Asp Glu Gln Val Pro Asn Pro Gly  
 20 25 30  
 His Glu Ala His Asp Gln Gly Gly Trp Asp Ala Arg Gln Ser Ile Ile  
 35 40 45  
 Arg Lys Val Val Asp Pro Glu Thr Gly Arg Thr Arg Leu Ile Lys Gly  
 50 55 60  
 Asp Gly Glu Val Leu Glu Glu Ile Val Thr Lys Glu Arg His Arg Glu  
 65 70 75 80  
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 85 90 95  
 Ala Gly Leu Leu Pro  
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<210> 3891  
 <211> 1687  
 <212> DNA  
 <213> Homo sapiens

<400> 3891  
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 120  
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 180  
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 240  
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 300  
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 360  
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 420  
 cgcaacagcc cctgcctcgt atatgtcact ttcaaccaga agatctatgt gtactgggag  
 480  
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 540  
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 660  
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 720  
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 780  
 ggatttgact ctgggcatga aagatggcag cagccctagg gtgaccgtga actatagacc  
 840

tcgcagtcctt ttcggtgaaa gaagagacaa gttgaccctc tgcccatttc cttatggacc  
 900  
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 960  
 acccactccc cactgtcact gtgttgaaaa cagagacttg tttgtgtggc cccaacaccc  
 1020  
 ataaggaaac caggcttttag gccagggga gcagtggagg taagggtcc acccatctt  
 1080  
 aagctctgtc ttccgtggca caattccaag ttcttgacgt tagtaattgt taaaggaatg  
 1140  
 gcaaactgtt ttgttttgaa ggatctttct acagtctggt cttacccatg ttcctagcaa  
 1200  
 ccctgagatg attttcttcc atttaccaaa gcagccgggt cagtgccttc tcacgttgcc  
 1260  
 gtattcttca ggtattagtc agcttcagaa gccctgctcc catttttcca cccacccatt  
 1320  
 ccccataaaa acagcttatt gtctccaaga caatagacat ttaaaatgtg atgcggggtt  
 1380  
 atgatccaga ccacaatcag aattatatct tgggtcattt atgtgccgtc tgttcttgat  
 1440  
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 1500  
 ccagcatttt ttaaataagggt agaatagaat aaagtaaaat agaaaatagc agagtacatt  
 1560  
 gctctcagtg taggtaagta ttgttttggt agtcatatgt gcatgtgtgt actgagtgcc  
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 caaatc  
 1687

<210> 3892

<211> 179

<212> PRT

<213> Homo sapiens

<400> 3892

Val	Arg	Val	Leu	Asn	Ile	Trp	Pro	Tyr	Pro	Gln	Gln	Glu	Cys	Leu	His
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Ser	Pro	Asn	Trp	Gln	His	Gln	Thr	Gly	His	Gly	Thr	Glu	Ser	Ser	Gly
		20						25					30		
Ser	Gly	Leu	Phe	Ala	Leu	Cys	Thr	Leu	Asp	Gly	Thr	Leu	Lys	Leu	Met
		35					40					45			
Glu	Glu	Met	Glu	Glu	Ala	Asp	Lys	Leu	Leu	Trp	Ser	Val	Gln	Val	Asp
		50				55					60				
His	Gln	Leu	Phe	Ala	Leu	Glu	Lys	Leu	Asp	Val	Thr	Gly	Asn	Gly	His
65				70					75					80	
Glu	Glu	Val	Val	Ala	Cys	Ala	Trp	Asp	Gly	Gln	Thr	Tyr	Ile	Ile	Asp
			85					90						95	
His	Asn	Arg	Thr	Val	Val	Arg	Phe	Gln	Val	Asp	Glu	Asn	Ile	Arg	Ala
		100						105					110		
Phe	Cys	Ala	Gly	Leu	Tyr	Ala	Cys	Lys	Glu	Gly	Arg	Asn	Ser	Pro	Cys
		115					120					125			
Leu	Val	Tyr	Val	Thr	Phe	Asn	Gln	Lys	Ile	Tyr	Val	Tyr	Trp	Glu	Val

130		135		140
Gln Leu Glu Arg Met Glu Ser Thr Asn Leu Val Lys Leu Leu Glu Thr				
145		150		155
Lys Pro Ser Thr Thr Ala Cys Cys Arg Ser Trp Ala Trp Ile Leu Thr				160
	165		170	175
Thr Ser Leu				

&lt;210&gt; 3893

&lt;211&gt; 1591

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3893

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 60  
 ggagatccgt attacagcta cctcaacctc aacaccgggg aaagttttgt gatgtactat  
 120  
 aagagtaaag aaaattgtgt tgtggataac atcaaagtgt gcagtaatga cactgggagt  
 180  
 ggaaaattca agtgtgtttg catcactatg agagtgcctc ggaaccaac tatcggagat  
 240  
 aaatttgcca gtcgccatgg gcagaagggc attttaagca gattgtggcc ggctgaggac  
 300  
 atgcctttta ctgagagtgg gatggtccca gacattctgt tcaatcccca tggttttcca  
 360  
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 420  
 ggtctctgcc atgatgctac acccttcac tctcagagg agaactcggc cttagaatac  
 480  
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 540  
 ggcacagtg ggctagaact ggaagcagac atcttcatag gagtggttta ttatcagcgc  
 600  
 ttacgccata tggcttcaga caaatttcaa gtaaggacaa ctggagcccc agacagagtc  
 660  
 accaaccagc ctattggggg aagaaatgtc caggggtggaa tccgttttgg ggagatggaa  
 720  
 cgggatgcgc ttttagctca tggtagatct tttctccttc atgaccgct cttcaactgc  
 780  
 tcagatcggt cggtagccca tgtgtgtgtg aagtgtggca gtttactctc tccactgttg  
 840  
 gagaagccac ccccttcttg gtctgccatg cgcaacagaa aatacaactg tactctgtgt  
 900  
 agtcgcagtg acactatcga tactgtttct gtgccttatg ttttcggta tttgtagct  
 960  
 gaactggcag ctatgaacat caaagtgaat ctggatgttg ttttaactga tgttgacctt  
 1020  
 ttggattaag aggactatca gattaaagca aaatgtaatt ttaattcaat gaagatatca  
 1080  
 ttaccaggtt actcttgaga tttttcaacg gtgttagaac tctcaaccaa gacctgaaaa  
 1140  
 ccaagtatgc aagggttctg aatctctctg gtagattaac tattgacaat gattttctgt  
 1200



tatctttggt caaaaagttc atgtcttctc aaaatatgaa atattgataa atggaagagc  
 1260  
 atacggtgac aagtctcctt tccaaaccca gggtccctac accctgctct cagcaggcag  
 1320  
 tgagtgtcac acacctgtta atccatcttg agcaggacag tactatacaa atagaatgca  
 1380  
 agctgtaatg taattttata ttttcttata gccacgttga agtaaaaaca aacagggtaca  
 1440  
 gtgtttttta ccagctttat agaagtacag ttgttacata tttaatgaat acaatttgat  
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 1560  
 ctgtcatctc caaaaaaaaa aaaaaaaaaa a  
 1591

<210> 3894

<211> 334

<212> PRT

<213> Homo sapiens

<400> 3894

Arg	Val	Leu	Gln	Lys	Leu	Asp	Asp	Asp	Gly	Leu	Pro	Phe	Ile	Gly	Ala
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Lys	Leu	Gln	Tyr	Gly	Asp	Pro	Tyr	Tyr	Ser	Tyr	Leu	Asn	Leu	Asn	Thr
		20						25					30		
Gly	Glu	Ser	Phe	Val	Met	Tyr	Tyr	Lys	Ser	Lys	Glu	Asn	Cys	Val	Val
		35					40					45			
Asp	Asn	Ile	Lys	Val	Cys	Ser	Asn	Asp	Thr	Gly	Ser	Gly	Lys	Phe	Lys
	50					55					60				
Cys	Val	Cys	Ile	Thr	Met	Arg	Val	Pro	Arg	Asn	Pro	Thr	Ile	Gly	Asp
65					70					75				80	
Lys	Phe	Ala	Ser	Arg	His	Gly	Gln	Lys	Gly	Ile	Leu	Ser	Arg	Leu	Trp
			85						90					95	
Pro	Ala	Glu	Asp	Met	Pro	Phe	Thr	Glu	Ser	Gly	Met	Val	Pro	Asp	Ile
			100					105					110		
Leu	Phe	Asn	Pro	His	Gly	Phe	Pro	Ser	Arg	Met	Thr	Ile	Gly	Met	Leu
		115					120					125			
Ile	Glu	Ser	Met	Ala	Gly	Lys	Ser	Ala	Ala	Leu	His	Gly	Leu	Cys	His
		130				135						140			
Asp	Ala	Thr	Pro	Phe	Ile	Phe	Ser	Glu	Glu	Asn	Ser	Ala	Leu	Glu	Tyr
145					150					155				160	
Phe	Gly	Glu	Met	Leu	Lys	Ala	Ala	Gly	Tyr	Asn	Phe	Tyr	Gly	Thr	Glu
			165						170					175	
Arg	Leu	Tyr	Ser	Gly	Ile	Ser	Gly	Leu	Glu	Leu	Glu	Ala	Asp	Ile	Phe
			180					185					190		
Ile	Gly	Val	Val	Tyr	Tyr	Gln	Arg	Leu	Arg	His	Met	Val	Ser	Asp	Lys
		195					200						205		
Phe	Gln	Val	Arg	Thr	Thr	Gly	Ala	Arg	Asp	Arg	Val	Thr	Asn	Gln	Pro
		210				215						220			
Ile	Gly	Gly	Arg	Asn	Val	Gln	Gly	Gly	Ile	Arg	Phe	Gly	Glu	Met	Glu
225				230					235					240	
Arg	Asp	Ala	Leu	Leu	Ala	His	Gly	Thr	Ser	Phe	Leu	Leu	His	Asp	Arg
				245					250					255	
Leu	Phe	Asn	Cys	Ser	Asp	Arg	Ser	Val	Ala	His	Val	Cys	Val	Lys	Cys

	260		265		270
Gly Ser Leu Leu Ser Pro Leu Leu Glu Lys Pro Pro Pro Ser Trp Ser					
	275		280		285
Ala Met Arg Asn Arg Lys Tyr Asn Cys Thr Leu Cys Ser Arg Ser Asp					
	290		295		300
Thr Ile Asp Thr Val Ser Val Pro Tyr Val Phe Arg Tyr Phe Val Ala					
305		310		315	320
Glu Leu Ala Ala Met Asn Ile Lys Val Lys Leu Asp Val Val					
	325		330		

&lt;210&gt; 3895

&lt;211&gt; 1227

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3895

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120  
gtgaggaggc aagagcagcc cagcattgag agtacatctc cgatttcaag aactgatgaa  
180  
attagaaaaa acacctacag aacattggat agcctggagc agaccattaa acagctcgaa  
240  
aatacaatca gtgaaatgag tcccaaagcc ctagttgata cctcatgttc ttccaacaga  
300  
gattctgttg caagtctatc ccacatagcc caagaggcct ctccccgacc cttgctagtt  
360  
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420  
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480  
cccggaaccc tggacaaacc cggcaagcag tccaaactgc aggatccccg ccaatatcgt  
540  
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900  
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960  
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1020  
acagcaaaaag aaacctctta aaggtcaaata cctattagga acaagtcgga gttacattta  
1080  
aaaaaaatta acagtctaca acaactgttt tcacaagaga atgtaacata ttgctgtatc  
1140

gtttgaggct taatgctaaa tatgtgctaa atactggatt aatagatttc agtaaagctc  
1200

gttcaaaaaa aaaaaaaaaa aaaaaaa  
1227

<210> 3896

<211> 346

<212> PRT

<213> Homo sapiens

<400> 3896

Lys	Thr	Leu	Arg	Val	Val	Val	Tyr	Glu	Glu	Glu	Glu	Glu	Asp	Gly	Thr
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Leu	Lys	Gln	His	Lys	Glu	Ala	Lys	Arg	Phe	Glu	Ile	Ala	Arg	Ser	Gln
			20					25					30		
Pro	Glu	Asp	Thr	Pro	Glu	Asn	Thr	Val	Arg	Arg	Gln	Glu	Gln	Pro	Ser
		35					40					45			
Ile	Glu	Ser	Thr	Ser	Pro	Ile	Ser	Arg	Thr	Asp	Glu	Ile	Arg	Lys	Asn
	50					55				60					
Thr	Tyr	Arg	Thr	Leu	Asp	Ser	Leu	Glu	Gln	Thr	Ile	Lys	Gln	Leu	Glu
65					70				75					80	
Asn	Thr	Ile	Ser	Glu	Met	Ser	Pro	Lys	Ala	Leu	Val	Asp	Thr	Ser	Cys
			85						90					95	
Ser	Ser	Asn	Arg	Asp	Ser	Val	Ala	Ser	Ser	Ser	His	Ile	Ala	Gln	Glu
			100					105					110		
Ala	Ser	Pro	Arg	Pro	Leu	Leu	Val	Pro	Asp	Glu	Gly	Pro	Thr	Ala	Leu
		115					120					125			
Glu	Pro	Pro	Thr	Ser	Ile	Pro	Ser	Ala	Ser	Arg	Lys	Gly	Ser	Ser	Gly
	130					135					140				
Ala	Pro	Gln	Thr	Ser	Arg	Met	Pro	Val	Pro	Met	Ser	Ala	Lys	Asn	Arg
145					150					155				160	
Pro	Gly	Thr	Leu	Asp	Lys	Pro	Gly	Lys	Gln	Ser	Lys	Leu	Gln	Asp	Pro
			165					170						175	
Arg	Gln	Tyr	Arg	Gln	Ala	Asn	Gly	Ser	Ala	Lys	Lys	Ser	Gly	Gly	Asp
		180					185						190		
Phe	Lys	Pro	Thr	Ser	Pro	Ser	Leu	Pro	Ala	Ser	Lys	Ile	Pro	Ala	Leu
	195					200						205			
Ser	Pro	Ser	Ser	Gly	Lys	Ser	Ser	Ser	Leu	Pro	Ser	Ser	Ser	Gly	Asp
	210				215					220					
Ser	Ser	Asn	Leu	Pro	Asn	Pro	Pro	Ala	Thr	Lys	Pro	Ser	Ile	Ala	Ser
225					230					235				240	
Asn	Pro	Leu	Ser	Pro	Gln	Thr	Gly	Pro	Pro	Ala	His	Ser	Ala	Ser	Leu
			245							250				255	
Ile	Pro	Ser	Val	Ser	Asn	Gly	Ser	Leu	Lys	Phe	Gln	Ser	Leu	Thr	His
		260					265						270		
Thr	Gly	Lys	Gly	His	His	Leu	Ser	Phe	Ser	Pro	Gln	Ser	Gln	Asn	Gly
	275						280					285			
Arg	Ala	Pro	Pro	Pro	Leu	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Ser	Pro	Ala
	290					295					300				
Ser	Ser	Val	Ser	Leu	Asn	Gln	Gly	Ala	Lys	Gly	Thr	Arg	Thr	Ile	His
305					310					315				320	
Thr	Pro	Ser	Leu	Thr	Ser	Tyr	Lys	Ala	Gln	Asn	Gly	Ser	Ser	Ser	Lys
			325						330					335	
Ala	Thr	Pro	Ser	Thr	Ala	Lys	Glu	Thr	Ser						

340

345

<210> 3897  
 <211> 366  
 <212> DNA  
 <213> Homo sapiens

<400> 3897  
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 cttctgggca cccacgcttt gtccatgaat ggaaagcaat gctgacggct gcccaatgtg  
 180  
 tccaggacgt ttctgaaact cctgttcttc tccccgtccc tctctctgtc ccactgtcca  
 240  
 cctcagtac ctctctctt cgtggctctc accccacact ctgccactgc cacattttcc  
 300  
 tctgcgcca gcctctgcct ccacctgaaa ctttcttgga aatctcaaaa tgtaattcca  
 360  
 ggtccc  
 366

<210> 3898  
 <211> 111  
 <212> PRT  
 <213> Homo sapiens

<400> 3898  
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 Met Ala Gly Arg Pro Gly Leu Leu His Trp Leu Leu Ala Ser Ser Gly  
 20 25 30  
 His Pro Arg Phe Val His Glu Trp Lys Ala Met Leu Thr Ala Ala Gln  
 35 40 45  
 Cys Val Gln Asp Val Ser Glu Thr Pro Val Pro Leu Pro Val Pro Leu  
 50 55 60  
 Ser Val Pro Leu Ser Thr Ser Val Thr Ser Ser Leu Arg Gly Ser His  
 65 70 75 80  
 Pro Thr Leu Cys His Cys His Ile Phe Leu Cys Ala Gln Pro Leu Pro  
 85 90 95  
 Pro Pro Glu Thr Phe Leu Glu Ile Ser Lys Cys Asn Ser Arg Ser  
 100 105 110

<210> 3899  
 <211> 1092  
 <212> DNA  
 <213> Homo sapiens

<400> 3899  
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 120

accttccgga aaatggcggc tgccaggccc agcctgggcc gagtcctccc aggatcctct  
 180  
 gtcctgttcc tgtgtgacat gcaggagaag ttccgccaca acatcgcccta cttcccacag  
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 360  
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<211> 249

<212> PRT

<213> Homo sapiens

<400> 3900

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&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3901

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<211> 312

<212> PRT

<213> Homo sapiens

<400> 3902

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Trp	Ala	Ala	Thr	Thr	Ala	Arg	Asn	Ala	Leu	Val	Val	Ser	Phe	Ala
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Ser	Val	Thr	Thr	Ala	Asn	Gly	Thr	Ile	Ser	Phe	Thr	Glu	Met	Val
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Ser	Ile	Ala	Val	Ala	Lys	Ala	Phe	Ala	Ser	Gln	Asn	Asn	Tyr	Arg
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Asp	Ala	Asn	Gln	Glu	Leu	Leu	Ala	Ile	Gly	Leu	Thr	Asn	Met	Leu
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Ser	Leu	Val	Ser	Ser	Tyr	Pro	Val	Thr	Gly	Ser	Phe	Gly	Arg	Thr
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Gly	Val	Leu	Val	Leu	Leu	Ser	Leu	Asp	Tyr	Leu	Thr	Ser	Leu	Phe
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Tyr	Ile	Pro	Lys	Ser	Ala	Leu	Ala	Ala	Val	Ile	Ile	Met	Ala	Val
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Pro	Leu	Phe	Asp	Thr	Lys	Ile	Phe	Arg	Thr	Leu	Trp	Arg	Val	Lys
			210			215					220			Arg
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Val	Gln	Tyr	Gly	Ile	Leu	Ala	Gly	Ala	Leu	Val	Ser	Leu	Leu	Met
														Leu

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 Leu Val Leu Gln Pro Ala Ser Gly Leu Ser Phe Pro Val Leu Cys Pro  
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 <212> DNA  
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 Val Ile Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala  
                     35                      40                      45  
 Phe Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile  
                     50                      55                      60  
 His Asn Ala Gly Ile Ser Ser Cys Gly Arg Thr Arg Glu Ala Phe Asn  
 65                      70                      75                      80  
 Leu Leu Leu Arg Val Asn His Ile Gly Pro Phe Leu Leu Thr His Leu



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 Arg Pro Val Val Leu Ala Ala Gly Ala Ala Ala Tyr Ala Asp Thr Lys  
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 Thr Gly Val Thr Cys Tyr Ala Ala His Pro Gly Pro Val Asn Ser Glu  
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 Val Pro Gly Ala Tyr Phe Phe Ser Phe Thr Ala Gly Lys Ala Pro His  
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&lt;210&gt; 3907

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3907

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 <213> Homo sapiens

<400> 3908

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Asp Arg Ala Asn Gln Glu Ser Lys Asp Gly Asp Pro Arg Lys Glu Thr
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Asp Pro Ser Ala Ser Ala Ser His Ala Ala Gly Ile Thr Gly Ser Arg
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His Arg Thr Arg Leu Phe Phe Pro Ser Ser Ser Gly Ser Ala Ser Thr
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 165          170          175
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Leu Glu Asp Val Asp Ala Ala Phe Thr Asp Thr Asp Cys Val Val Arg
 195          200          205
Phe Ala Gly Gly Gln Gln Trp Gly Gly Val Phe Tyr Ala Glu Ile Lys
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 260          265          270
Leu Leu Gly Ser Glu Glu Asn Leu Ala Pro Leu Ala Gly Glu Lys Ala
 275          280          285
Val Pro Pro Gly Asn Asp Pro Val Ser Pro Ala Met Val Arg Ser Arg
 290          295          300
Asn Pro Gly Lys Asp Asp Cys Ala Lys Glu Glu Met Ala Val Ala Ala
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 Val Glu Ala Arg Asp His Gly Thr Pro Ala Leu Thr Ala Ser Ala Ser  
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 Lys Leu Glu Arg Gln Tyr Val Leu Ala Val Thr Ala Ser Asp Gly Thr  
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 His Arg Pro Val Phe Gln Ser Ser His Tyr Thr Val Asn Val Asn Glu  
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 Asp Arg Pro Ala Gly Thr Thr Val Val Leu Ile Ser Ala Thr Asp Glu  
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 Pro Gln Phe Arg Ile Asp Ala Asp Thr Gly Ala Val Thr Thr Gln Ala  
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 Glu Leu Asp Tyr Glu Asp Gln Val Ser Tyr Thr Leu Ala Ile Thr Ala

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Gly Leu Arg Cys Arg Cys Pro Pro Gly Phe Thr Gly Asp Tyr Cys Glu		
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Cys Arg Ser Arg Glu Gly Tyr Thr Cys Leu Cys Arg Asp Gly Tyr		
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Gly Val Cys Lys Asn Gly Gly Thr Cys Val Asn Leu Leu Val Gly Gly		
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Phe Lys Cys Asp Cys Pro Ser Gly Asp Phe Glu Lys Pro Tyr Cys Gln		
	835	840
Val Thr Thr Arg Ser Phe Pro Ala His Ser Phe Ile Thr Phe Arg Gly		
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Leu Arg Gln Arg Phe His Phe Thr Leu Ala Leu Ser Phe Ala Thr Lys		
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Glu Arg Asp Gly Leu Leu Leu Tyr Asn Gly Arg Phe Asn Glu Lys His		
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Asp Phe Val Ala Leu Glu Val Ile Gln Glu Gln Val Gln Leu Thr Phe		
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&lt;210&gt; 3914

&lt;211&gt; 1435

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3914

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Val	Pro	Cys	Val	Ala	Ala	Leu	Cys	Ser	Asp	Glu	Ala	Glu	Arg	Leu	Thr
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Arg	Leu	Asn	His	Leu	Ser	Phe	Ala	Glu	Leu	Leu	Lys	Pro	Phe	Ser	Arg
		35					40					45			
Leu	Thr	Ser	Glu	Val	His	Met	Arg	Asp	Pro	Asn	Asn	Gln	Leu	His	Val
	50					55					60				
Ile	Lys	Asn	Leu	Lys	Ile	Ala	Val	Ser	Asn	Ile	Val	Thr	Gln	Pro	Pro
65					70					75				80	
Gln	Pro	Gly	Ala	Ile	Arg	Lys	Leu	Leu	Asn	Asp	Val	Val	Ser	Gly	Ser
			85						90					95	
Gln	Pro	Ala	Glu	Gly	Leu	Val	Ala	Asn	Val	Ile	Thr	Ala	Gly	Asp	Tyr
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Asp	Leu	Asn	Ile	Ser	Ala	Thr	Thr	Pro	Trp	Phe	Glu	Ser	Tyr	Arg	Glu
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Thr	Phe	Leu	Gln	Ser	Met	Pro	Ala	Ser	Asp	His	Glu	Phe	Leu	Asn	His
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Tyr	Leu	Ala	Cys	Met	Leu	Val	Ala	Ser	Ser	Ser	Glu	Ala	Glu	Pro	Val
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Glu	Gln	Phe	Ser	Lys	Leu	Ser	Gln	Glu	Gln	His	Arg	Ile	Gln	His	Asn
				165					170					175	
Ser	Asp	Tyr	Ser	Tyr	Pro	Lys	Trp	Phe	Ile	Pro	Asn	Thr	Leu	Lys	Tyr
		180						185					190		
Tyr	Val	Leu	Leu	His	Asp	Val	Ser	Ala	Gly	Asp	Glu	Gln	Arg	Ala	Glu
		195					200					205			
Ser	Ile	Tyr	Glu	Glu	Met	Lys	Gln	Lys	Tyr	Gly	Thr	Gln	Gly	Cys	Tyr

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Leu Leu Lys Ile Asn Ser Arg Thr Ser Asn Arg Ala Ser Asp Glu Gln		
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Ile Pro Asp Pro Trp Ser Gln Tyr Leu Gln Lys Asn Ser Ile Gln Asn		240
	245	250
Gln Glu Ser Tyr Glu Asp Gly Pro Cys Thr Ile Thr Ser Asn Lys Asn		255
	260	265
Ser Asp Asn Asn Leu Leu Ser Leu Asp Gly Leu Asp Asn Glu Val Lys		270
	275	280
Asp Gly Leu Pro Asn Asn Phe Arg Ala His Pro Leu Gln Leu Glu Gln		285
	290	295
Ser Ser Asp Pro Ser Asn Ser Ile Asp Gly Pro Asp His Leu Arg Ser		300
305	310	315
Ala Ser Ser Leu His Glu Thr Lys Lys Gly Asn Thr Gly Ile Ile His		320
	325	330
Gly Ala Cys Leu Thr Leu Thr Asp His Asp Arg Ile Arg Gln Phe Ile		335
	340	345
Gln Lys Phe Thr Phe Arg Gly Leu Leu Pro His Ile Glu Lys Thr Ile		350
	355	360
Arg Gln Leu Asn Asp Gln Leu Ile Ser Arg Lys Gly Leu Ser Arg Ser		365
	370	375
Leu Phe Ser Ala Thr Lys Lys Trp Phe Ser Gly Ser Lys Val Pro Glu		380
385	390	395
Lys Ser Ile Asn Asp Leu Lys Asn Thr Ser Gly Leu Leu Tyr Pro Pro		400
	405	410
Glu Ala Pro Glu Leu Gln Ile Arg Lys Met Ala Asp Leu Cys Phe Leu		415
	420	425
Val Gln His Tyr Asp Leu Ala Tyr Ser Cys Tyr His Thr Ala Lys Lys		430
	435	440
Asp Phe Leu Asn Asp Gln Ala Met Leu Tyr Ala Ala Gly Ala Leu Glu		445
	450	455
Met Ala Ala Val Ser Ala Phe Leu Gln Pro Gly Ala Pro Arg Pro Tyr		460
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Pro Ala His Tyr Met Asp Thr Ala Ile Gln Thr Tyr Arg Asp Ile Cys		480
	485	490
Lys Asn Met Val Leu Ala Glu Arg Cys Val Leu Leu Ser Ala Glu Leu		495
	500	505
Leu Lys Ser Gln Ser Lys Tyr Ser Glu Ala Ala Ala Leu Leu Ile Arg		510
	515	520
Leu Thr Ser Glu Asp Ser Asp Leu Arg Ser Ala Leu Leu Leu Glu Gln		525
	530	535
Ala Ala His Cys Phe Ile Asn Met Lys Ser Pro Met Val Arg Lys Tyr		540
545	550	555
Ala Phe His Met Ile Leu Ala Gly His Arg Phe Ser Lys Ala Gly Gln		560
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Lys Lys His Ala Leu Arg Cys Tyr Cys Gln Ala Met Gln Val Tyr Lys		575
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Gly Lys Gly Trp Ser Leu Ala Glu Asp His Ile Asn Phe Thr Ile Gly		590
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Arg Gln Ser Tyr Thr Leu Arg Gln Leu Asp Asn Ala Val Ser Ala Phe		605
	610	615
Arg His Ile Leu Ile Asn Glu Ser Lys Gln Ser Ala Ala Gln Gln Gly		620
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Ala Phe Leu Arg Glu Tyr Leu Tyr Val Tyr Lys Asn Val Ser Gln Leu		640

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 Ser Ala Thr Arg Val Phe Phe Gly His Asp Arg Arg Pro Ala Asp Gly  
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 Glu Lys Gln Ala Ala Thr His Val Ser Leu Asp Gln Glu Tyr Asp Ser  
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 Glu Ser Ser Gln Gln Trp Arg Glu Leu Glu Glu Gln Val Val Ser Val  
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&lt;210&gt; 3915

&lt;211&gt; 1802

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3915

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 50 55 60  
 Ser Trp Arg Tyr Glu Glu Thr Ser Glu Asn Glu Ala Val Ala Glu Glu  
 65 70 75 80  
 Glu Glu Glu Glu Val Glu Glu Glu Gly Glu Glu Asp Val Phe Thr Glu  
 85 90 95  
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 Glu Thr Asn Thr Glu Thr Pro Ala Pro Ser Pro Thr Val Val Arg Pro  
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 Lys Asp Arg Arg Val Gly Thr Pro Ser Gln Gly Pro Phe Leu Arg Gly  
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 Ser Thr Ile Ile Arg Ser Lys Thr Phe Ser Pro Gly Pro Gln Ser Gln  
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 Tyr Val Cys Arg Leu Asn Arg Ser Asp Ser Asp Ser Ser Thr Leu Ser  
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 Lys Lys Pro Pro Phe Val Arg Asn Ser Leu Glu Arg Arg Ser Val Arg  
 180 185 190  
 Met Lys Arg Pro Ser Pro Pro Pro Gln Pro Ser Ser Val Lys Ser Leu  
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 210 215 220  
 Gln Ala Thr Arg Thr Trp His Ser Gln Leu Thr Gln Glu Ile Ser Val  
 225 230 235 240  
 Leu Lys Glu Leu Lys Glu Gln Leu Glu Gln Ala Lys Ser His Gly Glu  
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 Lys Glu Leu Pro Gln Trp Leu Arg Glu Asp Glu Arg Phe Arg Leu Leu  
 260 265 270  
 Leu Arg Met Leu Glu Lys Arg Gln Met Asp Arg Ala Glu His Lys Gly  
 275 280 285  
 Glu Leu Gln Thr Asp Lys Met Met Arg Ala Ala Ala Lys Asp Val His  
 290 295 300  
 Arg Leu Arg Gly Gln Ser Cys Lys Glu Pro Pro Glu Val Gln Ser Phe  
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 Arg Glu Lys Met Ala Phe Phe Thr Arg Pro Arg Met Asn Ile Pro Ala

325  
Leu Ser Ala Asp Asp Val  
340

330

335

<210> 3917  
<211> 597  
<212> DNA  
<213> Homo sapiens

<400> 3917  
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120  
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180  
agcaagaact ctgaaaagaa gatggaaagt gaggaagaca gtaattggga gaaaagtcca  
240  
gacaatgaag attctggaga ctctaaggat atccgcctta ctcttatgga agaagtattg  
300  
cttctgggac taaaagataa agaggggtac acatctttct ggaatgactg catatcatca  
360  
ggcctgcgag ggggcatcct gatagagctg gccatgcggg gtcgaatcta tctggaaccc  
420  
ccgaccatgc gtaagaagcg actactagac agaaaggtag tgctaaagtc agacagccca  
480  
acaggtgatg ttttactgga tgaaactctg aaacacatca aagcaactga acccacagaa  
540  
actgtccaaa catggataga gctactcact ggtgagacct ggaaccctt caaatta  
597

<210> 3918  
<211> 152  
<212> PRT  
<213> Homo sapiens

<400> 3918  
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Ser Glu Lys Lys Met Glu Ser Glu Glu Asp Ser Asn Trp Glu Lys Ser  
20 25 30  
Pro Asp Asn Glu Asp Ser Gly Asp Ser Lys Asp Ile Arg Leu Thr Leu  
35 40 45  
Met Glu Glu Val Leu Leu Leu Gly Leu Lys Asp Lys Glu Gly Tyr Thr  
50 55 60  
Ser Phe Trp Asn Asp Cys Ile Ser Ser Gly Leu Arg Gly Gly Ile Leu  
65 70 75 80  
Ile Glu Leu Ala Met Arg Gly Arg Ile Tyr Leu Glu Pro Pro Thr Met  
85 90 95  
Arg Lys Lys Arg Leu Leu Asp Arg Lys Val Leu Leu Lys Ser Asp Ser  
100 105 110  
Pro Thr Gly Asp Val Leu Leu Asp Glu Thr Leu Lys His Ile Lys Ala  
115 120 125  
Thr Glu Pro Thr Glu Thr Val Gln Thr Trp Ile Glu Leu Leu Thr Gly



130  
Glu Thr Trp Asn Pro Phe Lys Leu  
145 150

140

<210> 3919  
<211> 1278  
<212> DNA  
<213> Homo sapiens

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caggcacagc atccaccag ccccatcaag tcctccagcg ccgactccac tcccagcccc  
180  
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240  
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360  
ctagcggcag acgcccggc tgctcgctgcc tatcgagacg agctggattc cctgcgggag  
420  
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480  
gacgtggact tctacaaggc ccgcatggag gagctgagag aagataatat cattttaatt  
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gaaaccaagg ccatgctgga ggaacagctg actgctgctc gggcccgggg cgataaagtc  
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660  
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720  
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780  
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aagcagagca accaagatct ggagaccctc agtgaggagc tgatcagaga gaaggagcag  
1080  
ctgcagagtg acatggagac cctgaaggct gacaaagcca ggcagatcaa ggaccttgag  
1140  
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agtgaggccc gcatgaaaga cgtggagaag gagaacaaag ccctccacca gacgggtgacg  
1260  
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1278

<210> 3920  
 <211> 426  
 <212> PRT  
 <213> Homo sapiens

<400> 3920  
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 Leu Thr Gln Glu Arg Asp Tyr Leu Gln Ala Gln His Pro Pro Ser Pro  
 35 40 45  
 Ile Lys Ser Ser Ser Ala Asp Ser Thr Pro Ser Pro Thr Ser Ser Leu  
 50 55 60  
 Ser Ser Glu Asp Lys Gln His Leu Ala Val Glu Leu Ala Asp Thr Lys  
 65 70 75 80  
 Ala Arg Leu Arg Arg Val Arg Gln Glu Leu Glu Asp Lys Thr Glu Gln  
 85 90 95  
 Leu Val Asp Thr Arg His Glu Val Asp Gln Leu Val Leu Glu Leu Gln  
 100 105 110  
 Lys Val Lys Gln Glu Asn Ile Gln Leu Ala Ala Asp Ala Arg Ser Ala  
 115 120 125  
 Arg Ala Tyr Arg Asp Glu Leu Asp Ser Leu Arg Glu Lys Ala Asn Arg  
 130 135 140  
 Val Glu Arg Leu Glu Leu Glu Leu Thr Arg Cys Lys Glu Lys Leu His  
 145 150 155 160  
 Asp Val Asp Phe Tyr Lys Ala Arg Met Glu Glu Leu Arg Glu Asp Asn  
 165 170 175  
 Ile Ile Leu Ile Glu Thr Lys Ala Met Leu Glu Glu Gln Leu Thr Ala  
 180 185 190  
 Ala Arg Ala Arg Gly Asp Lys Val His Glu Leu Glu Lys Glu Asn Leu  
 195 200 205  
 Gln Leu Lys Ser Lys Leu His Asp Leu Glu Leu Asp Arg Asp Thr Asp  
 210 215 220  
 Lys Lys Arg Ile Glu Glu Leu Leu Glu Glu Asn Met Val Leu Glu Ile  
 225 230 235 240  
 Ala Gln Lys Gln Ser Met Asn Glu Ser Ala His Leu Gly Trp Glu Leu  
 245 250 255  
 Glu Gln Leu Ser Lys Asn Ala Asp Leu Ser Asp Ala Ser Arg Lys Ser  
 260 265 270  
 Phe Val Phe Glu Leu Asn Glu Cys Ala Ser Ser Arg Ile Leu Lys Leu  
 275 280 285  
 Glu Lys Glu Asn Gln Ser Leu Gln Ser Thr Ile Gln Gly Leu Arg Asp  
 290 295 300  
 Ala Ser Leu Val Leu Glu Ser Gly Leu Lys Cys Gly Glu Leu Glu  
 305 310 315 320  
 Lys Glu Asn His Gln Leu Ser Lys Lys Ile Glu Lys Leu Gln Thr Gln  
 325 330 335  
 Leu Glu Arg Glu Lys Gln Ser Asn Gln Asp Leu Glu Thr Leu Ser Glu  
 340 345 350  
 Glu Leu Ile Arg Glu Lys Glu Gln Leu Gln Ser Asp Met Glu Thr Leu  
 355 360 365  
 Lys Ala Asp Lys Ala Arg Gln Ile Lys Asp Leu Glu Gln Glu Lys Asp

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      370              375              380
His Leu Asn Arg Ala Met Trp Ser Leu Arg Glu Arg Ser Gln Val Ser
385              390              395              400
Ser Glu Ala Arg Met Lys Asp Val Glu Lys Glu Asn Lys Ala Leu His
      405              410              415
Gln Thr Val Thr Glu Ala Asn Gly Lys Leu
      420              425

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<210> 3921  
 <211> 413  
 <212> DNA  
 <213> Homo sapiens

<400> 3921  
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 atgectctgc tgcttgccag cctcgtgacc ttcattcatg cagggccttg ttttcttgat  
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 300  
 ctccagccct tggagcttag gcagtgtagt gttaggatga ttattggatt tcctccacag  
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 413

<210> 3922  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

<400> 3922  
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 Leu Leu Ala Ser Leu Val Thr Phe Ile His Ala Gly Pro Cys Phe Leu  
 35 40 45  
 Asp Ser Val Gly Pro Ile Pro Ala Pro Arg Gly Asp Gly Cys Cys Arg  
 50 55 60  
 Asp Val Gln Ala Val Glu Gly Ser Arg Glu Trp Ala Trp Arg Ser Ala  
 65 70 75 80  
 Ser Leu Ala Pro Leu Leu Asp Ala Phe Leu Gln Pro Leu Glu Leu Arg  
 85 90 95  
 Gln Cys Ser Val Arg Met Ile Ile Gly Phe Pro Pro Gln Phe Leu Ala  
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 His Ser Phe Val Ala Leu Val Thr Ala Phe Cys Asp Asn Ile  
 115 120 125

<210> 3923  
 <211> 820

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3923

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720
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820

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&lt;210&gt; 3924

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3924

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Met Gly Glu Glu Leu Leu Gly Ser Glu Gly Ile His Ser Ser Lys Glu
 1           5           10          15
Lys Pro Leu Val Ala Val Asn Thr Arg Leu Ser Gly Gly Gln Val Leu
          20          25          30
Ser Glu Tyr Thr Gly Pro Thr Ser Ala Asp Leu Asp His Phe Pro Ser
          35          40          45
Val Ser Gln Thr Lys Ala Glu Gln Asp Ser Asp Asn Lys Ser Ser Thr
          50          55          60
Glu Ile Pro Leu Glu Thr Cys Cys Ser Ser Glu Leu Lys Gly Gly Gly
65          70          75          80
Ser Gly Thr Ser Leu Glu Arg Glu Gln Phe Glu Gly Leu Gly Ser Thr
          85          90          95
Pro Asp Ala Lys Leu Asp Lys Thr Cys Ile Ser Arg Ala Met Lys Ile
          100         105         110
Thr Thr Val Asn Ser Val Leu Pro Gln Asn Ser Val Leu Gly Gly Val

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115	120	125
Leu Lys Thr Lys Gln Gln Leu Lys Thr Leu Asn His Phe Asp Leu Thr		
130	135	140
Asn Gly Val Leu Val Glu Ser Leu Ser Glu Glu Pro Leu Pro Ser Leu		
145	150	155
Arg Arg Gly Arg Lys Arg His Cys Lys Thr Lys His Leu Glu Gln Asn		160
165	170	175
Gly Ser Leu Lys Lys Leu Arg Gln Thr Ser Gly Glu Val Gly Leu Ala		
180	185	190
Pro Thr Asp Pro Val Leu Arg Glu Met Glu Gln Lys Leu Gln Gln Glu		
195	200	205
Glu Glu Asp Arg Gln Leu Ala Leu Gln Leu Gln Arg Met Phe Asp Asn		
210	215	220
Glu Arg Arg Thr Val Ser Arg Arg Lys Gly Ser Val Asp Gln Tyr Leu		
225	230	235
Leu Arg Ser Ser Asn Met Ala Gly Gly Arg		240
245	250	

&lt;210&gt; 3925

&lt;211&gt; 3296

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3925

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 3296

&lt;210&gt; 3926

&lt;211&gt; 683

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3926

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Leu	Ile	Cys	Ile	Leu	Thr	Phe	Gly	Ala	Ala	Ile	Phe	Leu	Trp	Leu	Ile
			20					25					30		
Thr	Arg	Pro	Gln	Pro	Val	Leu	Pro	Leu	Leu	Asp	Leu	Asn	Asn	Gln	Ser
		35					40					45			
Val	Gly	Ile	Glu	Gly	Gly	Ala	Arg	Lys	Gly	Val	Ser	Gln	Lys	Asn	Asn
	50					55					60				
Asp	Leu	Thr	Ser	Cys	Cys	Phe	Ser	Asp	Ala	Lys	Thr	Met	Tyr	Glu	Val
65				70					75					80	
Phe	Gln	Arg	Gly	Leu	Ala	Val	Ser	Asp	Asn	Gly	Pro	Cys	Leu	Gly	Tyr
			85					90						95	
Arg	Lys	Pro	Asn	Gln	Pro	Tyr	Arg	Trp	Leu	Ser	Tyr	Lys	Gln	Val	Ser
			100					105					110		
Asp	Arg	Ala	Glu	Tyr	Leu	Gly	Ser	Cys	Leu	Leu	His	Lys	Gly	Tyr	Lys
		115				120						125			
Ser	Ser	Pro	Asp	Gln	Phe	Val	Gly	Ile	Phe	Ala	Gln	Asn	Arg	Pro	Glu
		130				135					140				
Trp	Ile	Ile	Ser	Glu	Leu	Ala	Cys	Tyr	Thr	Tyr	Ser	Met	Val	Ala	Val
145				150				155						160	
Pro	Leu	Tyr	Asp	Thr	Leu	Gly	Pro	Glu	Ala	Ile	Val	His	Ile	Val	Asn

165 170 175  
 Lys Ala Asp Ile Ala Met Val Ile Cys Asp Thr Pro Gln Lys Ala Leu  
 180 185 190  
 Val Leu Ile Gly Asn Val Glu Lys Gly Phe Thr Pro Ser Leu Lys Val  
 195 200 205  
 Ile Ile Leu Met Asp Pro Phe Asp Asp Asp Leu Lys Gln Arg Gly Glu  
 210 215 220  
 Lys Ser Gly Ile Glu Ile Leu Ser Leu Tyr Asp Ala Glu Asn Leu Asp  
 225 230 235 240  
 Lys Glu His Phe Arg Lys Pro Val Pro Pro Ser Pro Glu Asp Leu Ser  
 245 250 255  
 Val Ile Cys Phe Thr Ser Gly Thr Thr Gly Asp Pro Lys Gly Ala Met  
 260 265 270  
 Ile Thr His Gln Asn Ile Val Ser Asn Ala Ala Ala Phe Leu Lys Cys  
 275 280 285  
 Val Glu His Ala Tyr Glu Pro Thr Pro Asp Asp Val Ala Ile Ser Tyr  
 290 295 300  
 Leu Pro Leu Ala His Met Phe Glu Arg Ile Val Gln Ala Val Val Tyr  
 305 310 315 320  
 Ser Cys Gly Ala Arg Val Gly Phe Phe Gln Gly Asp Ile Arg Leu Leu  
 325 330 335  
 Ala Asp Asp Met Lys Thr Leu Lys Pro Thr Leu Phe Pro Ala Val Pro  
 340 345 350  
 Arg Leu Leu Asn Arg Ile Tyr Asp Lys Val Gln Asn Glu Ala Lys Thr  
 355 360 365  
 Pro Leu Lys Lys Phe Leu Leu Lys Leu Ala Val Ser Ser Lys Phe Lys  
 370 375 380  
 Glu Leu Gln Lys Gly Ile Ile Arg His Asp Ser Phe Trp Asp Lys Leu  
 385 390 395 400  
 Ile Phe Ala Lys Ile Gln Asp Ser Leu Gly Gly Arg Val Arg Val Ile  
 405 410 415  
 Val Thr Gly Ala Ala Pro Ile Ser Thr Pro Val Leu Thr Phe Phe Arg  
 420 425 430  
 Ala Ala Met Gly Cys Trp Val Phe Glu Ala Tyr Gly Gln Thr Glu Cys  
 435 440 445  
 Thr Gly Gly Cys Thr Phe Thr Leu Pro Gly Asp Trp Thr Ser Gly His  
 450 455 460  
 Val Gly Val Pro Leu Ala Cys Asn Tyr Val Lys Leu Glu Asp Val Ala  
 465 470 475 480  
 Asp Met Asn Tyr Phe Thr Val Asn Asn Glu Gly Glu Val Cys Ile Lys  
 485 490 495  
 Gly Thr Asn Val Phe Lys Gly Tyr Leu Lys Asp Pro Glu Lys Thr Gln  
 500 505 510  
 Glu Ala Leu Asp Ser Asp Gly Trp Leu His Thr Gly Asp Ile Gly Arg  
 515 520 525  
 Trp Leu Pro Asn Gly Thr Leu Lys Ile Ile Asp Arg Lys Lys Asn Ile  
 530 535 540  
 Phe Lys Leu Ala Gln Gly Glu Tyr Ile Ala Pro Glu Lys Ile Glu Asn  
 545 550 555 560  
 Ile Tyr Asn Arg Ser Gln Pro Val Leu Gln Ile Phe Val His Gly Glu  
 565 570 575  
 Ser Leu Arg Ser Ser Leu Val Gly Val Val Val Pro Asp Thr Asp Val  
 580 585 590  
 Leu Pro Ser Phe Ala Ala Lys Leu Gly Val Lys Gly Ser Phe Glu Glu



595	600	605
Leu Cys Gln Asn Gln Val Val Arg Glu Ala Ile Leu Glu Asp Leu Gln		
610	615	620
Lys Ile Gly Lys Glu Ser Gly Leu Lys Thr Phe Glu Gln Val Lys Ala		
625	630	635
Ile Phe Leu His Pro Glu Pro Phe Ser Ile Glu Asn Gly Leu Leu Thr		
645	650	655
Pro Thr Leu Lys Ala Lys Arg Gly Glu Leu Ser Lys Tyr Phe Arg Thr		
660	665	670
Gln Ile Asp Ser Leu Tyr Glu His Ile Gln Asp		
675	680	

&lt;210&gt; 3927

&lt;211&gt; 3197

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3927

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<210> 3928

<211> 180

<212> PRT

<213> Homo sapiens

<400> 3928

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	20						25					30			
Asp	Ser	Ser	Ser	Arg	Arg	Arg	Arg	Ser	Cys	Cys	Thr	Gly	Ser	Leu	Gly
	35					40					45				
Pro	Met	Pro	Arg	Leu	Pro	Ser	Leu	Trp	Pro	Leu	Ser	Leu	Pro	Leu	Arg
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65				70				75						80	
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			85					90					95		
Pro	Leu	Ser	Ser	Phe	Pro	Gly	Arg	Asn	Glu	Gly	Gly	Ser	Glu	Met	Glu
	100					105						110			
Ile	Leu	Gly	Val	Cys	Pro	Val	Ser	Pro	Gly	Ala	Leu	Ser	Tyr	Met	Glu
	115					120					125				
Ser	Pro	Thr	Gly	Phe	Trp	Arg	Pro	Arg	Glu	Ala	Ser	Ser	Leu	Glu	Leu
	130				135						140				
Ala	Lys	Gly	Ile	Ser	Lys	Arg	Arg	His	Phe	Leu	Pro	Ala	Pro	Ala	Leu
145				150				155						160	
Cys	Pro	Asn	Pro	Arg	Ser	Ser	Glu	Ala	Phe	Pro	Gly	Ala	Val	Cys	Val
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Thr	Leu	Ala	Ile												
			180												

<210> 3929

<211> 470

<212> DNA

<213> Homo sapiens

&lt;400&gt; 3929

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180  
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420  
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&lt;210&gt; 3930

&lt;211&gt; 115

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3930

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Pro	Pro	Arg	Cys	Ala	Gly	Arg	Ser	Ala	Pro	Leu	Ser	Gly	Pro	Asp	Ser
			20					25					30		
Gln	Ser	Glu	Asn	Glu	Ala	Ser	Pro	Val	Lys	Arg	Pro	Arg	Leu	Leu	Glu
		35					40					45			
Asn	Thr	Glu	Arg	Ser	Glu	Glu	Thr	Ser	Arg	Ser	Lys	Gln	Lys	Ser	Arg
	50					55					60				
Arg	Arg	Cys	Phe	Gln	Cys	Gln	Thr	Lys	Leu	Glu	Leu	Val	Gln	Gln	Glu
65				70					75					80	
Leu	Gly	Ser	Cys	Arg	Cys	Gly	Tyr	Val	Phe	Cys	Met	Leu	His	Arg	Leu
			85					90					95		
Pro	Glu	Gln	His	Asp	Cys	Thr	Phe	Asp	His	Met	Gly	Val	Ala	Gly	Arg
			100					105					110		
Ser	His	His													
			115												

&lt;210&gt; 3931

&lt;211&gt; 3568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3931

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<210> 3932

<211> 293

<212> PRT

<213> Homo sapiens

<400> 3932

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			20					25					30		
Cys	His	Tyr	Trp	Lys	Ser	Ser	Ser	Ile	Glu	Glu	Arg	Gly	Tyr	Trp	Gly
		35				40						45			
Ser	Gly	Ser	Ala	Ile	Met	Ala	Pro	Ala	Pro	Phe	Arg	Ser	Gln	Ser	Thr
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Arg	Ser	Ser	Ile	Glu	Asp	Asp	Phe	Asn	Tyr	Gly	Ser	Ser	Val	Ala	Ser
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Ala	Thr	Val	His	Ile	Arg	Met	Ala	Phe	Leu	Arg	Lys	Val	Tyr	Ser	Ile
			85						90					95	
Leu	Ser	Leu	Gln	Val	Leu	Leu	Thr	Thr	Val	Thr	Ser	Thr	Val	Phe	Leu
		100					105						110		
Tyr	Phe	Glu	Ser	Val	Arg	Thr	Phe	Val	His	Glu	Ser	Pro	Ala	Leu	Ile
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Lys	Phe	Phe	Phe	Tyr	Ser	Glu	Ile	Met	Glu	Leu	Val	Leu	Ala	Ala	Ala
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Gly	Ala	Leu	Leu	Phe	Cys	Gly	Phe	Ile	Ile	Tyr	Asp	Thr	His	Ser	Leu
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Met	His	Lys	Leu	Ser	Pro	Glu	Glu	Tyr	Val	Leu	Ala	Ala	Ile	Ser	Leu
		260						265					270		
Tyr	Leu	Asp	Ile	Ile	Asn	Leu	Phe	Leu	His	Leu	Leu	Arg	Phe	Leu	Glu
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<210> 3933

<211> 4082

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3933

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<211> 130

<212> PRT

<213> Homo sapiens

<400> 3934

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Ala	Ala	Gly	Thr	Ser	Ser	Pro	Ile	Arg	Pro	Val	Ser	Ser	Pro	Val	Leu
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Ser	Ser	Ser	Asn	Lys	Ser	Pro	Ser	Ser	Ala	Trp	Ser	Ser	Ser	Ser	Trp
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His	Gly	Arg	Ile	Lys	Gly	Gly	Met	Lys	Gly	Phe	Gln	Ser	Phe	Met	Val
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Ser	Asp	Ser	Asn	Met	Ser	Phe	Val	Glu	Phe	Val	Glu	Leu	Phe	Lys	Ser
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 <213> Homo sapiens

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<210> 3936  
 <211> 265  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3936

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Tyr Arg Thr Ile Tyr Arg Thr Ala Tyr Arg Arg Ser Pro Gly Leu Ala
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Pro Ala Arg Pro Arg Tyr Ala Cys Cys Pro Gly Trp Lys Arg Thr Ser
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Gly Leu Pro Gly Ala Cys Gly Ala Ala Ile Cys Gln Pro Pro Cys Arg
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Asn Gly Gly Ser Cys Val Gln Pro Gly Arg Cys Arg Cys Pro Ala Gly
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Trp Arg Gly Asp Thr Cys Gln Ser Asp Val Asp Glu Cys Ser Ala Arg
      130          135          140
Arg Gly Gly Cys Pro Gln Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp
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Cys Gln Cys Trp Glu Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys
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Val Pro Lys Gly Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Lys
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Gln Pro Trp Leu Cys Leu Ala Trp Gly Gly Gly Gln Ala Val Asp Ile
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      210          215          220
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Gly Gly Phe Pro Arg Thr Gly Gly Arg Leu Pro Gly Ala Ser Tyr Gln
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Pro Arg Arg Gln Lys Cys Pro Val Pro
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&lt;210&gt; 3937

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3937

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<210> 3938

<211> 154

<212> PRT

<213> Homo sapiens

<400> 3938

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Arg	Arg	Gly	Trp	Arg	Gly	Leu	Arg	Ala	Pro	Arg	Tyr	Arg	Asp	Pro	Gly
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Thr	Gly	Trp	Leu	Ala	Ala	Lys	Ala	Ala	Pro	Ala	Gly	Gly	His	Arg	Glu
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<211> 490

<212> DNA

<213> Homo sapiens

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<210> 3940  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

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<210> 3941  
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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 3942

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 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
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<210> 3943  
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 <212> DNA  
 <213> Homo sapiens

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<211> 435

<212> PRT

<213> Homo sapiens

<400> 3944

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Val	Gly	Thr	Met	Ser	Gln	Val	Leu	Gly	Lys	Pro	Gln	Pro	Gln	Asp	Glu
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Asp	Asp	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Glu	Leu	Val	Gly	Leu	Ala
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Asp	Tyr	Gly	Asp	Gly	Pro	Asp	Ser	Ser	Asp	Ala	Asp	Pro	Asp	Ser	Gly
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Thr	Glu	Glu	Gly	Val	Leu	Asp	Phe	Ser	Asp	Pro	Phe	Ser	Thr	Glu	Val
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Lys	Pro	Arg	Ile	Leu	Leu	Met	Gly	Leu	Arg	Arg	Ser	Gly	Lys	Ser	Ser
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Ile	Gln	Lys	Val	Val	Phe	His	Lys	Met	Ser	Pro	Asn	Glu	Thr	Leu	Phe
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Leu	Glu	Ser	Thr	Asn	Lys	Ile	Cys	Arg	Glu	Asp	Val	Ser	Asn	Ser	Ser
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Phe	Val	Asn	Phe	Gln	Ile	Trp	Asp	Phe	Pro	Gly	Gln	Ile	Asp	Phe	Phe
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Ile	Phe	Val	Ile	Asp	Ala	Gln	Asp	Asp	Tyr	Met	Glu	Ala	Leu	Thr	Arg
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Leu	His	Ile	Thr	Val	Ser	Lys	Ala	Tyr	Lys	Val	Asn	Pro	Asp	Met	Asn

195                      200                      205  
 Phe Glu Val Phe Ile His Lys Val Asp Gly Leu Ser Asp Asp His Lys  
 210                      215                      220  
 Ile Glu Thr Gln Arg Asp Ile His Gln Arg Ala Asn Asp Asp Leu Ala  
 225                      230                      235                      240  
 Asp Ala Gly Leu Glu Lys Ile His Leu Ser Phe Tyr Leu Thr Ser Ile  
 245                      250                      255  
 Tyr Asp His Ser Ile Phe Glu Ala Phe Ser Lys Val Val Gln Lys Leu  
 260                      265                      270  
 Ile Pro Gln Leu Pro Thr Leu Glu Asn Leu Leu Asn Ile Phe Ile Ser  
 275                      280                      285  
 Asn Ser Gly Ile Glu Lys Ala Phe Leu Phe Asp Val Val Ser Lys Ile  
 290                      295                      300  
 Tyr Ile Ala Thr Asp Ser Thr Pro Val Asp Met Gln Thr Tyr Glu Leu  
 305                      310                      315                      320  
 Cys Cys Asp Met Ile Asp Val Val Ile Asp Ile Ser Cys Ile Tyr Gly  
 325                      330                      335  
 Leu Lys Glu Asp Gly Ala Gly Thr Pro Tyr Asp Lys Glu Ser Thr Ala  
 340                      345                      350  
 Ile Ile Lys Leu Asn Asn Thr Thr Val Leu Tyr Leu Lys Glu Val Thr  
 355                      360                      365  
 Lys Phe Leu Ala Leu Val Cys Phe Val Arg Glu Glu Ser Phe Glu Arg  
 370                      375                      380  
 Lys Gly Leu Ile Asp Tyr Asn Phe His Cys Phe Arg Lys Ala Ile His  
 385                      390                      395                      400  
 Glu Val Phe Glu Val Arg Met Lys Val Val Lys Ser Arg Lys Val Gln  
 405                      410                      415  
 Asn Arg Leu Gln Lys Lys Lys Arg Ala Thr Pro Asn Gly Thr Pro Arg  
 420                      425                      430  
 Val Leu Leu  
 435

<210> 3945  
 <211> 696  
 <212> DNA  
 <213> Homo sapiens

<400> 3945  
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 120  
 cgggcgcgcc cagcagtagc accgcccgcg cccgcccctg gacacttgta agtttcgatt  
 180  
 tccgatttcc gcggaaccga gtcccgcgcc gcggcagagc cagcacagcc agcgcgccat  
 240  
 ggcggacccg gaggtgtgct gcttcatcac caaaatcctg tgcgcccacg ggggccgcat  
 300  
 ggcctggac gcgctgctcc aggagatcgc gctgtctgag ccgcagctct gtgaggtgct  
 360  
 gcaggtggcc gggcccgacc gctttgtggt gttggagacc ggcggcgagg ccgggatcac  
 420  
 ccgatcgggtg gtggccacca ctcgagcccg ggtctgccgt cgcaagtact gccagagacc  
 480

ctgcgataac ctgcatctct gcaaactcaa cttgctgggc cggtgcaact attcgagctc  
 540  
 cgagcgggaat ttatgcaaatt attctcatga ggttctctca gaagagaact tcaaagtcct  
 600  
 gaaaaatcac gaactctctg gactgaacaa agaggaatta gcagtgtctc tctccaaag  
 660  
 tgatcctttt tttatgcccg agccctatgc agtctc  
 696

<210> 3946  
 <211> 165  
 <212> PRT  
 <213> Homo sapiens

<400> 3946  
 Met Gln Val Ile Ala Gly Ser Leu Ala Val Leu Ala Thr Ala Asp Pro  
 1 5 10 15  
 Gly Ser Ser Gly Gly His His Arg Ser Gly Asp Pro Gly Leu Ala Ala  
 20 25 30  
 Gly Leu Gln His His Lys Ala Val Gly Pro Gly His Leu Gln His Leu  
 35 40 45  
 Thr Glu Leu Arg Leu Arg Gln Arg Asp Leu Leu Glu Gln Arg Val Gln  
 50 55 60  
 Gly His Ala Ala Pro Val Gly Ala Gln Asp Phe Gly Asp Glu Ala Ala  
 65 70 75 80  
 His Leu Arg Val Arg His Gly Ala Leu Ala Val Leu Ala Leu Pro Arg  
 85 90 95  
 Arg Gly Thr Arg Phe Arg Gly Asn Arg Lys Ser Lys Leu Thr Ser Val  
 100 105 110  
 Gln Gly Arg Ala Arg Ala Val Leu Leu Leu Gly Ala Pro Gly Val Ser  
 115 120 125  
 Glu Gly Ala Leu Ser Val Ala Val Ser Pro Ala Gln Arg Ser Thr Leu  
 130 135 140  
 Gly Ser Gln Val Lys Arg Leu Asp Leu Thr Asp Arg Val Leu Val Ala  
 145 150 155 160  
 Gly Leu Gln Pro Ala  
 165

<210> 3947  
 <211> 400  
 <212> DNA  
 <213> Homo sapiens

<400> 3947  
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 60  
 atcaccttcc tgcagcctgt ggtgaatgga gagctgacca tgctgggaga gatcaccac  
 120  
 ctgcagggca tcatcgacga cttggtggtg ctgacagcag aacccacaa actgcctccc  
 180  
 gccagcgagc aggtaatcaa agacctaaag ggctcggact acagctgggtc ctaccagacc  
 240  
 ccaccctcat caccagcag ctccagctcc cggaagtcca gcatgtgcag tgccccagc  
 300

agcagtagca gtgccaaggg tggcggaagc cccatggcct gggggtgccc aaacatactc  
360

accagttcc acctgtcgt accgcagcct ggcgcagcca  
400

<210> 3948

<211> 133

<212> PRT

<213> Homo sapiens

<400> 3948

Xaa	Glu	Lys	Gln	Ala	Ile	Leu	Leu	Ala	Leu	Ile	Glu	Glu	Arg	Gly	Arg
1			5					10					15		
Phe	Cys	Thr	Phe	Ile	Thr	Phe	Leu	Gln	Pro	Val	Val	Asn	Gly	Glu	Leu
		20					25					30			
Thr	Met	Leu	Gly	Glu	Ile	Thr	His	Leu	Gln	Gly	Ile	Ile	Asp	Asp	Leu
	35					40					45				
Val	Val	Leu	Thr	Ala	Glu	Pro	His	Lys	Leu	Pro	Pro	Ala	Ser	Glu	Gln
	50				55					60					
Val	Ile	Lys	Asp	Leu	Lys	Gly	Ser	Asp	Tyr	Ser	Trp	Ser	Tyr	Gln	Thr
65			70					75					80		
Pro	Pro	Ser	Ser	Pro	Ser	Ser	Ser	Ser	Ser	Arg	Lys	Ser	Ser	Met	Cys
		85					90					95			
Ser	Ala	Pro	Ser	Ser	Ser	Ser	Ala	Lys	Gly	Gly	Gly	Ser	Pro	Met	
	100						105					110			
Ala	Trp	Gly	Cys	Pro	Asn	Ile	Leu	Thr	Gln	Phe	His	Leu	Ser	Leu	Pro
	115					120						125			
Gln	Pro	Gly	Ala	Ala											
	130														

<210> 3949

<211> 1462

<212> DNA

<213> Homo sapiens

<400> 3949

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taccagaga gcaagacaca ggtctgcatt gtgcagcaca gctaaagttc ctttagaaaa  
120  
ccaccatctt tctggctgca agagtcaggg gtcagaatgg ggggcagcca ccactgctga  
180  
aaagagttgg gggaggaacc cctgaaagga gagccagaaa tgggggagct ccaaactctt  
240  
tgtgtcagct ctgtccaaat ctctaactga cttgtgaact aaaaagaaag gtttctacca  
300  
tcagcagact gtcacccata gacatttaca cagtattttg gtttggagtt cttcctaata  
360  
gtcacttcac agaaaaatat ataggtgctg ttttgccctg gaagccagac agatcagaat  
420  
attgggtaag atagctgggt cagctgtcct tggatggatc ccaaacta tgctcctttc  
480  
caggcctgag aatcgccgaa cactgtccaa cacaatgtga tcaccaaca tatcacatgc  
540

atcactgagc tgcaccaccc ttttcttccct cattgctttc aagagctcat acttatagtg  
 600  
 ctccactttct tttgcggtgc tgacaagcac agcaacatcc tttggagaat agcccctatc  
 660  
 aaagaagcgc ctgcacgtgt ctgccacaca ggtcattatt tgctccacag tcaagtattt  
 720  
 cttaattcgt aaggttccct gaacaccctg ggaccattcg gcttcaggaa atacctcgag  
 780  
 gcacccagtgc gggatattaa ttggaggatt ttctataatt agttgcattt ctttttgtaa  
 840  
 gtactcggct atttcatctg cattgcgaac tattctgggtg agctcttctc ttggatattg  
 900  
 gtctgagaga ggagggaggc cactgtgacc caagtggctg gtctgaaagt aatccagaaa  
 960  
 gatccagaga actcctggac aatccttttc tctctgagtg atgctttttg ccttcccata  
 1020  
 ccagtcccca tcttcagtac ggaaattctg agcttcgtca atgacgatgt gttgaatgtg  
 1080  
 ttcaaatttt tctcttagga aagtttcccg ggtctctgct cggcagatat ttctatcact  
 1140  
 gataaagttc ctcagaggct ggttttcaca aacgtagaga attctgtgtg cctcacagtg  
 1200  
 aaacacattc ctgatcttct ccatgatttt catggccatg atgttcttcc ctgagccagg  
 1260  
 taagccgtgg acaaacaact ctctgttctt gcggaggctt ctggagaata tctcatactg  
 1320  
 ctgggctgtg agcagattta aaacctcaca gccgagctgg tcaactcaaga gagacctgaa  
 1380  
 gccgagtaag acaatcacga gggactgcag cagggttcc atgtgctggg tgctgcaag  
 1440  
 gctataggac gcagggtaat cc  
 1462

&lt;210&gt; 3950

&lt;211&gt; 351

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3950

Met	Glu	Ala	Leu	Leu	Gln	Ser	Leu	Val	Ile	Val	Leu	Leu	Gly	Phe	Arg
1			5					10					15		
Ser	Leu	Leu	Ser	Asp	Gln	Leu	Gly	Cys	Glu	Val	Leu	Asn	Leu	Leu	Thr
		20					25					30			
Ala	Gln	Gln	Tyr	Glu	Ile	Phe	Ser	Arg	Ser	Leu	Arg	Lys	Asn	Arg	Glu
		35				40					45				
Leu	Phe	Val	His	Gly	Leu	Pro	Gly	Ser	Gly	Lys	Asn	Ile	Met	Ala	Met
		50				55					60				
Lys	Ile	Met	Glu	Lys	Ile	Arg	Asn	Val	Phe	His	Cys	Glu	Ala	His	Arg
65					70				75					80	
Ile	Leu	Tyr	Val	Cys	Glu	Asn	Gln	Pro	Leu	Arg	Asn	Phe	Ile	Ser	Asp
			85					90					95		
Arg	Asn	Ile	Cys	Arg	Ala	Glu	Thr	Arg	Glu	Thr	Phe	Leu	Arg	Glu	Lys
			100					105				110			
Phe	Glu	His	Ile	Gln	His	Ile	Val	Ile	Asp	Glu	Ala	Gln	Asn	Phe	Arg

115	120	125
Thr Glu Asp Gly Asp Trp Tyr Gly Lys Ala Lys Ser Ile Thr Gln Arg		
130	135	140
Glu Lys Asp Cys Pro Gly Val Leu Trp Ile Phe Leu Asp Tyr Phe Gln		
145	150	155
Thr Ser His Leu Gly His Ser Gly Leu Pro Pro Leu Ser Asp Gln Tyr		
165	170	175
Pro Arg Glu Glu Leu Thr Arg Ile Val Arg Asn Ala Asp Glu Ile Ala		
180	185	190
Glu Tyr Leu Gln Lys Glu Met Gln Leu Ile Ile Glu Asn Pro Pro Ile		
195	200	205
Asn Ile Pro Thr Gly Cys Leu Glu Val Phe Pro Glu Ala Glu Trp Ser		
210	215	220
Gln Gly Val Gln Gly Thr Leu Arg Ile Lys Lys Tyr Leu Thr Val Glu		
225	230	235
Gln Ile Met Thr Cys Val Ala Asp Thr Cys Arg Arg Phe Phe Asp Arg		
245	250	255
Gly Tyr Ser Pro Lys Asp Val Ala Val Leu Val Ser Thr Ala Lys Glu		
260	265	270
Val Glu His Tyr Lys Tyr Glu Leu Leu Lys Ala Met Arg Lys Lys Arg		
275	280	285
Val Val Gln Leu Ser Asp Ala Cys Asp Met Leu Gly Asp His Ile Val		
290	295	300
Leu Asp Ser Val Arg Arg Phe Ser Gly Leu Glu Arg Ser Ile Val Phe		
305	310	315
Gly Ile His Pro Arg Thr Ala Asp Pro Ala Ile Leu Pro Asn Ile Leu		
325	330	335
Ile Cys Leu Ala Ser Arg Ala Lys Gln His Leu Tyr Ile Phe Leu		
340	345	350

&lt;210&gt; 3951

&lt;211&gt; 1012

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3951

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60  
tggaagttct ttccttccc aactctttcc agaccaagc actctgggac tcaactccata  
120  
gtccaggagt tccaggttcc ggattatggt ccatggcagc agtccaagca ggaaaccaag  
180  
ccatctactc tgctccagt ccaacaagcc aacagccttc atacaagcaa aatgaagact  
240  
ttgactaggg tccaaccagt gtttcacttc aagcccacta cgggtggtgac aagctgccag  
300  
ccgaagaatc caagagaact acatagaagg cggaagttgg accctgggaa gatgcatgcc  
360  
aaaatctggt taatgaagac ctcgctcagg agcgggaggg ccgctctgcg agagctccga  
420  
agccgtgaga acttctcag caagctcaac cgggagctga tcgagaccat ccaggagatg  
480  
gagaacagca cgacctgca cgtgcggggc ctgctgcagc agcaggacac cctggcgacc  
540

atcatcgaca tcttggagta ctcaaacaag aagaggctgc agcaattgaa atctgagctt  
 600  
 caggagtggg aagaaaagaa gaaatgcaag atgagctatc ttgagcagca ggcagagcag  
 660  
 ctgaatgccca agattgagaa gacccaggag gaagtgaact tcctgagcac ttacatggac  
 720  
 catgagtatt ccatcaagtc tgtccagatc tccactctta tgcgccactg cagcagggtta  
 780  
 aggacagcca gcaggtaggg gagcccctgc ccctntccca ccagactgtn tgggaggcag  
 840  
 gactggtggc caacaccgtt ctgctggctc ccaggatgag ctggatgacc tcggtgagat  
 900  
 gcgcagaaaag gtcctgggaa tccttgctccg acaagattca gaagaagaag aaaaaaattc  
 960  
 tgagttctgt ggtggcgggtg agtagccagt tgctgtgtgg gagcggggat cc  
 1012

<210> 3952

<211> 188

<212> PRT

<213> Homo sapiens

<400> 3952

Met	Lys	Thr	Leu	Thr	Arg	Val	Gln	Pro	Val	Phe	His	Phe	Lys	Pro	Thr
1				5					10					15	
Thr	Val	Val	Thr	Ser	Cys	Gln	Pro	Lys	Asn	Pro	Arg	Glu	Leu	His	Arg
			20					25					30		
Arg	Arg	Lys	Leu	Asp	Pro	Gly	Lys	Met	His	Ala	Lys	Ile	Trp	Leu	Met
		35				40						45			
Lys	Thr	Ser	Leu	Arg	Ser	Gly	Arg	Ala	Ala	Leu	Arg	Glu	Leu	Arg	Ser
	50					55					60				
Arg	Glu	Asn	Phe	Leu	Ser	Lys	Leu	Asn	Arg	Glu	Leu	Ile	Glu	Thr	Ile
65					70					75					80
Gln	Glu	Met	Glu	Asn	Ser	Thr	Thr	Leu	His	Val	Arg	Ala	Leu	Leu	Gln
				85						90				95	
Gln	Gln	Asp	Thr	Leu	Ala	Thr	Ile	Ile	Asp	Ile	Leu	Glu	Tyr	Ser	Asn
			100					105					110		
Lys	Lys	Arg	Leu	Gln	Gln	Leu	Lys	Ser	Glu	Leu	Gln	Glu	Trp	Glu	Glu
		115					120					125			
Lys	Lys	Lys	Cys	Lys	Met	Ser	Tyr	Leu	Glu	Gln	Gln	Ala	Glu	Gln	Leu
		130				135						140			
Asn	Ala	Lys	Ile	Glu	Lys	Thr	Gln	Glu	Glu	Val	Asn	Phe	Leu	Ser	Thr
145					150					155					160
Tyr	Met	Asp	His	Glu	Tyr	Ser	Ile	Lys	Ser	Val	Gln	Ile	Ser	Thr	Leu
			165						170					175	
Met	Arg	His	Cys	Ser	Arg	Leu	Arg	Thr	Ala	Ser	Arg				
			180						185						

<210> 3953

<211> 2900

<212> DNA

<213> Homo sapiens

<400> 3953

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gttaagggtac caggtccttg gagcgaccag cagccccacc tgaagtccgc atgcaactct  
120  
gacaagctca ggtgcttgtt ttaaggaaag gggctactag agtcttacca acagcgagcc  
180  
caggtgggag atgaaacagg tactcccaa aatagggtcat ccgagggagg aaaactgatg  
240  
gagagcaciaa tgtgctctga gcgtttttaa tgtttttaag cttttaaatg atttcttcaa  
300  
ggccgagcag cagcagcaaa ggtgtggctt aaaggattaa gggggtttct gctggcacct  
360  
agaatgaagt tactctatta ctaatcaagc cgagaggagg ccactatgc ccccgtttat  
420  
catcctttcc cagttccttt ttgctggtca caaaacgatg ctcacatc cccactaaag  
480  
caggaggcca ggagcccagc ctctttaga aacagcgagg gtataactgc cctcccgttc  
540  
tgcccccaag acgaaggagg actctcgga gccaaagaaag gtttaagaag tctttctgga  
600  
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660  
ggagaggaca gaggcgcgat gggcctgctg cagggcctgc tccgagtcg gaagctgctg  
720  
ctggtcgtct gcgtcccgt cctgctgctg cctctgcccg tcctccaccc cagcagcgag  
780  
gcctcgtgtg cttacgtgct gatcgtgact gctgtgtact ggggtgtcga ggcagtgcct  
840  
ctgggagctg cagccctggt gccggccttc ctctaccgt tcttcggagt cctccggtcc  
900  
aatgaggtgg cggcggagta cttcaagaac accacgctgc tgctgggtgg ggtcatctgc  
960  
gtggcggctg ccgtggagaa gtggaacctg cataagcgca ttgctctgc catggtcttg  
1020  
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1080  
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1140  
ctgcaggagc tggtcagtgc tgaggacgag cagctcgtgg cgggcaactc caacaccgaa  
1200  
gaggccgaac ccatcagtct ggatgtaaag aacagccaac cttctctgga actcatcttt  
1260  
gtcaatgaag acaggtccaa cgcagacctc accactctga tgcacaacga gaacctgaat  
1320  
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1380  
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1440  
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1500  
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1560  
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1620



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 1680  
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 1740  
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 1800  
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 1860  
 gagcctggct ttgtccctgg ctgggattct ttctttgaaa agaaaggcta cgtactgat  
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 gccacagtct ctgtcttctt tggcttcttc ctcttctca ttccagcgaa gaagccctgc  
 1980  
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 2040  
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 2100  
 tatgctctgg cttctggtag caagagctct ggctctcta catggattgg gaaccagatg  
 2160  
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 2220  
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 2280  
 agcctgtctg aaacgatgca cattaacccc ctctacacc tgatcccagt caccatgtgc  
 2340  
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 2400  
 gggcactgcc agatcaaaga tatggtgaaa gctggcctgg gagtcaacgt tattggactg  
 2460  
 gtgatagtaa tgggtggccat caacacctgg ggagttagcc tcttccacct ggacacttac  
 2520  
 ccagcatggg cgagggtcag caacatcact gatcaagcct aacgccaagt gtacaaactg  
 2580  
 gcccaaccac aggagctgcc agtatccagc agtatctgga ccacaggcaa agaaaaccac  
 2640  
 taggaccacc aggagcacac aaccccagac ccacgccgga gggcatccct ccaccagaag  
 2700  
 attccgccac ctcaagtga ctgcaggaat cctccaacaa ccacaaacac atcgttcgct  
 2760  
 gttagtgtct tcttctgcc ctcagcacca cagctcaaga aaacctaaag tttcaataca  
 2820  
 accataggct cacagaaaaa gaaaaagaaa ataaaaatta aattaaaaaa aaagaagaca  
 2880  
 aagaaaaaaa aaaaaaaaaa  
 2900

&lt;210&gt; 3954

&lt;211&gt; 627

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3954

Met Gly Leu Leu Gln Gly Leu Leu Arg Val Arg Lys Leu Leu Leu Val  
 1 5 10 15  
 Val Cys Val Pro Leu Leu Leu Leu Pro Leu Pro Val Leu His Pro Ser

20 25 30  
 Ser Glu Ala Ser Cys Ala Tyr Val Leu Ile Val Thr Ala Val Tyr Trp  
 35 40 45  
 Val Ser Glu Ala Val Pro Leu Gly Ala Ala Ala Leu Val Pro Ala Phe  
 50 55 60  
 Leu Tyr Pro Phe Phe Gly Val Leu Arg Ser Asn Glu Val Ala Ala Glu  
 65 70 75 80  
 Tyr Phe Lys Asn Thr Thr Leu Leu Leu Val Gly Val Ile Cys Val Ala  
 85 90 95  
 Ala Ala Val Glu Lys Trp Asn Leu His Lys Arg Ile Ala Leu Arg Met  
 100 105 110  
 Val Leu Met Ala Gly Ala Lys Pro Gly Met Leu Leu Leu Cys Phe Met  
 115 120 125  
 Cys Cys Thr Thr Leu Leu Ser Met Trp Leu Ser Asn Thr Ser Thr Thr  
 130 135 140  
 Ala Met Val Met Pro Ile Val Glu Ala Val Leu Gln Glu Leu Val Ser  
 145 150 155 160  
 Ala Glu Asp Glu Gln Leu Val Ala Gly Asn Ser Asn Thr Glu Glu Ala  
 165 170 175  
 Glu Pro Ile Ser Leu Asp Val Lys Asn Ser Gln Pro Ser Leu Glu Leu  
 180 185 190  
 Ile Phe Val Asn Glu Asp Arg Ser Asn Ala Asp Leu Thr Thr Leu Met  
 195 200 205  
 His Asn Glu Asn Leu Asn Gly Val Pro Ser Ile Thr Asn Pro Ile Lys  
 210 215 220  
 Thr Ala Asn Gln His Gln Gly Lys Lys Gln His Pro Ser Gln Glu Lys  
 225 230 235 240  
 Pro Gln Val Leu Thr Pro Ser Pro Arg Lys Gln Lys Leu Asn Arg Lys  
 245 250 255  
 Tyr Arg Ser His His Asp Gln Met Ile Cys Lys Cys Leu Ser Leu Ser  
 260 265 270  
 Ile Ser Tyr Ser Ala Thr Ile Gly Gly Leu Thr Thr Ile Ile Gly Thr  
 275 280 285  
 Ser Thr Ser Leu Ile Phe Leu Glu His Phe Asn Asn Gln Tyr Pro Ala  
 290 295 300  
 Ala Glu Val Val Asn Phe Gly Thr Trp Phe Leu Phe Ser Phe Pro Ile  
 305 310 315 320  
 Ser Leu Ile Met Leu Val Val Ser Trp Phe Trp Met His Trp Leu Phe  
 325 330 335  
 Leu Gly Cys Asn Phe Lys Glu Thr Cys Ser Leu Ser Lys Lys Lys  
 340 345 350  
 Thr Lys Arg Glu Gln Leu Ser Glu Lys Arg Ile Gln Glu Glu Tyr Glu  
 355 360 365  
 Lys Leu Gly Asp Ile Ser Tyr Pro Glu Met Val Thr Gly Phe Phe Phe  
 370 375 380  
 Ile Leu Met Thr Val Leu Trp Phe Thr Arg Glu Pro Gly Phe Val Pro  
 385 390 395 400  
 Gly Trp Asp Ser Phe Phe Glu Lys Lys Gly Tyr Arg Thr Asp Ala Thr  
 405 410 415  
 Val Ser Val Phe Leu Gly Phe Leu Leu Phe Leu Ile Pro Ala Lys Lys  
 420 425 430  
 Pro Cys Phe Gly Lys Lys Asn Asp Gly Glu Asn Gln Glu His Ser Leu  
 435 440 445  
 Gly Thr Glu Pro Ile Ile Thr Trp Lys Asp Phe Gln Lys Thr Met Pro

450                      455                      460  
 Trp Glu Ile Val Ile Leu Val Gly Gly Gly Tyr Ala Leu Ala Ser Gly  
 465                      470                      475                      480  
 Ser Lys Ser Ser Gly Leu Ser Thr Trp Ile Gly Asn Gln Met Leu Ser  
                     485                      490                      495  
 Leu Ser Ser Leu Pro Pro Trp Ala Val Thr Leu Leu Ala Cys Ile Leu  
                     500                      505                      510  
 Val Ser Ile Val Thr Glu Phe Val Ser Asn Pro Ala Thr Ile Thr Ile  
                     515                      520                      525  
 Phe Leu Pro Ile Leu Cys Ser Leu Ser Glu Thr Met His Ile Asn Pro  
                     530                      535                      540  
 Leu Tyr Thr Leu Ile Pro Val Thr Met Cys Ile Ser Phe Ala Val Met  
 545                      550                      555                      560  
 Leu Pro Val Gly Asn Pro Pro Asn Ala Ile Val Phe Ser Tyr Gly His  
                     565                      570                      575  
 Cys Gln Ile Lys Asp Met Val Lys Ala Gly Leu Gly Val Asn Val Ile  
                     580                      585                      590  
 Gly Leu Val Ile Val Met Val Ala Ile Asn Thr Trp Gly Val Ser Leu  
                     595                      600                      605  
 Phe His Leu Asp Thr Tyr Pro Ala Trp Ala Arg Val Ser Asn Ile Thr  
                     610                      615                      620  
 Asp Gln Ala  
 625

&lt;210&gt; 3955

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3955

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 522

&lt;210&gt; 3956

&lt;211&gt; 174

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3956

Xaa Asn Ser Glu Asp Tyr Val Phe Asp Ser Val Ser Gly Asn Asn Phe  
 1 5 10 15  
 Glu Tyr Thr Leu Glu Ala Ser Lys Ser Leu Arg Gln Lys Pro Gly Asp  
 20 25 30  
 Ser Thr Met Thr Tyr Leu Asn Lys Gly Gln Phe Tyr Pro Ile Thr Leu  
 35 40 45  
 Lys Glu Val Ser Ser Ser Glu Asn Pro Ser Ser His Ser Lys Val Arg  
 50 55 60  
 Ser Val Ile Met Val Val Phe Ala Glu Asp Lys Ser Arg Glu Asp Gln  
 65 70 75 80  
 Leu Arg His Trp Lys Tyr Trp His Ser Arg Gln His Thr Ala Lys Gln  
 85 90 95  
 Arg Cys Ile Asp Ile Ala Asp Tyr Lys Glu Ser Phe Asn Thr Ile Ser  
 100 105 110  
 Asn Ile Glu Glu Ile Ala Tyr Asn Ala Ile Ser Phe Thr Trp Asp Ile  
 115 120 125  
 Asn Asp Glu Ala Lys Val Phe Ile Ser Val Asn Cys Leu Ser Thr Asp  
 130 135 140  
 Phe Ser Ser Gln Lys Gly Val Lys Gly Leu Pro Leu Asn Ile Gln Val  
 145 150 155 160  
 Asp Thr Tyr Ser Tyr Asn Asn Arg Ser Asn Lys Pro Val His  
 165 170

&lt;210&gt; 3957

&lt;211&gt; 3891

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3957

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 180  
 aaccagatac ttatggagaa gtacctgaag ctgcaggata cctgccgtac tcagttggtg  
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 tggttggtac gggaactggt gaagagtggg gttctgggag ccgatggtgt ttgtatgacg  
 300  
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 360  
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3891

&lt;210&gt; 3958

&lt;211&gt; 440

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3958

Xaa Cys Arg Glu Ala Asn Asp Ala Leu Asn Ala Tyr Val Cys Lys Gly  
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 Leu Pro Gln His Glu Glu Ile Cys Leu Gly Leu Phe Thr Leu Ile Leu  
 20 25 30  
 Thr Glu Pro Ala Gln Ala Gln Lys Cys Tyr Arg Asp Leu Ala Leu Val  
 35 40 45  
 Ser Arg Asp Gly Met Asn Ile Val Leu Asn Lys Ile Asn Gln Ile Leu  
 50 55 60  
 Met Glu Lys Tyr Leu Lys Leu Gln Asp Thr Cys Arg Thr Gln Leu Val  
 65 70 75 80  
 Trp Leu Val Arg Glu Leu Val Lys Ser Gly Val Leu Gly Ala Asp Gly  
 85 90 95  
 Val Cys Met Thr Phe Met Lys Gln Ile Ala Gly Gly Asp Val Thr Ala  
 100 105 110  
 Lys Asn Ile Trp Leu Ala Glu Ser Val Leu Asp Ile Leu Thr Glu Gln  
 115 120 125  
 Arg Glu Trp Val Leu Lys Ser Ser Ile Leu Ile Ala Met Ala Val Tyr  
 130 135 140  
 Thr Tyr Leu Arg Leu Ile Val Asp His His Gly Thr Ala Gln Leu Gln  
 145 150 155 160  
 Ala Leu Arg Gln Lys Glu Val Asp Phe Cys Ile Ser Leu Leu Arg Glu  
 165 170 175  
 Arg Phe Met Glu Cys Leu Met Ile Gly Arg Asp Leu Val Arg Leu Leu  
 180 185 190  
 Gln Asn Val Ala Arg Ile Pro Glu Phe Glu Leu Leu Trp Lys Asp Ile  
 195 200 205  
 Ile His Asn Pro Gln Ala Leu Ser Pro Gln Phe Thr Gly Ile Leu Gln  
 210 215 220  
 Leu Leu Gln Ser Arg Thr Ser Arg Lys Phe Leu Ala Cys Arg Leu Thr  
 225 230 235 240  
 Pro Asp Met Glu Thr Lys Leu Leu Phe Met Thr Ser Arg Val Arg Phe  
 245 250 255  
 Gly Gln Gln Lys Arg Tyr Gln Asp Trp Phe Gln Arg Gln Tyr Leu Ser  
 260 265 270  
 Thr Pro Asp Ser Gln Ser Leu Arg Cys Asp Leu Ile Arg Tyr Ile Cys  
 275 280 285  
 Gly Val Val His Pro Ser Asn Glu Val Leu Ser Ser Asp Ile Leu Pro  
 290 295 300  
 Arg Trp Ala Ile Ile Gly Trp Leu Leu Thr Thr Cys Thr Ser Asn Val  
 305 310 315 320  
 Ala Ala Ser Asn Ala Lys Leu Ala Leu Phe Tyr Asp Trp Leu Phe Phe  
 325 330 335  
 Ser Pro Asp Lys Asp Ser Ile Met Asn Ile Glu Pro Ala Ile Leu Val  
 340 345 350  
 Met His His Ser Met Lys Pro His Pro Ala Ile Thr Ala Thr Leu Leu  
 355 360 365  
 Asp Phe Met Cys Arg Ile Ile Pro Asn Phe Tyr Pro Pro Leu Glu Gly  
 370 375 380  
 His Val Arg Gln Gly Val Phe Ser Ser Leu Asn His Ile Val Glu Lys

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385          390          395          400
Arg Val Leu Ala Cys Lys Lys Tyr Trp Leu Tyr Leu Arg Leu Leu Gly
          405          410          415
Ile Cys Leu Leu Xaa Leu Leu Glu Glu Phe Leu Ser Cys His Arg Ile
          420          425          430
Thr Lys Thr Pro Ser Ser Pro Val
          435          440

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<210> 3959  
 <211> 752  
 <212> DNA  
 <213> Homo sapiens

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<400> 3959
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120
agaaaatgtc ttctcccata tacagagacc ctcataccat ttggggacat tgcccaaaa
180
ggacgggctt tggcgtgaaa gaacatttct accccggctg tttgtgtgct gtcaccccag
240
gtcagggctg aataatgacc acttggtaga cctgggtgctc acagagcctt catttggttg
300
tataaggggc caaattcacc tctcgatttc cttttttcct ttcagaatgc agtttccaag
360
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420
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480
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540
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600
actgcttgaa cagagcacac tttgtccttc ctgggtgtgt cctactatcg cttgcgcgac
660
ggggtctgag tgtacttggg ttccctctaaa gcaacgttct gcggttggt gcgtgcgac
720
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752

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<210> 3960  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

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<400> 3960
Pro Leu Gly Arg Pro Gly Ala His Arg Ala Phe Ile Trp Leu Tyr Lys
1          5          10          15
Gly Pro Asn Ser Pro Leu Asp Phe Leu Phe Ser Phe Gln Asn Ala Val
          20          25          30
Ser Lys Tyr Gly Ser Gln Phe Gln Gly Asn Ser Gln His Asp Ala Leu
          35          40          45
Glu Phe Leu Leu Trp Leu Leu Asp Arg Val His Glu Asp Leu Glu Gly

```



50	55	60
Ser Ser Arg Trp Ala Arg Cys Arg Arg Ser Phe Arg Leu Lys Pro Leu		
65	70	75
Lys Pro Leu Arg Thr Ala Cys His His Gln Leu Ser Phe Leu		80
85	90	

&lt;210&gt; 3961

&lt;211&gt; 2505

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3961

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420
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480
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600
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660
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900
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960
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1140
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1260

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 1380  
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 1920  
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 1980  
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 2505

&lt;210&gt; 3962

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3962

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Gly	Asn	Gly	Thr	Pro	Cys	Ser	Leu	Lys	Gln	Asn	Arg	Pro	Arg	Ser	Ser
			20					25				30			
Thr	Val	Met	Tyr	Ile	Cys	His	Pro	Glu	Ser	Lys	His	Glu	Ile	Leu	Ser

35	40	45
Val Ala Glu Val Thr Thr Cys Glu Tyr Glu Val Val Ile Leu Thr Pro		
50	55	60
Leu Leu Cys Ser His Pro Lys Tyr Arg Phe Arg Ala Ser Pro Val Asn		
65	70	75
Asp Ile Phe Cys Gln Ser Leu Pro Gly Ser Pro Phe Lys Pro Leu Thr		
85	90	95
Leu Arg Gln Leu Glu Gln Gln Glu Glu Ile Leu Arg Val Pro Phe Arg		
100	105	110
Arg Asn Lys Glu Glu Asp Leu Gln Ser Thr Lys Glu Glu Arg Phe Pro		
115	120	125
Ala Ile His Lys Ser Ile Ala Ile Gly Ser Gln Pro Val Leu Thr Val		
130	135	140
Gly Thr Thr His Ile Ser Lys Leu Thr Asp Asp Gln Leu Ile Lys Glu		
145	150	155
Phe Leu Ser Gly Ser Tyr Cys Phe Arg Gly Gly Val Gly Trp Trp Lys		
165	170	175
Tyr Glu Phe Cys Tyr Gly Lys His Val His Gln Tyr His Glu Asp Lys		
180	185	190
Asp Ser Gly Lys Thr Ser Val Val Val Gly Thr Trp Asn Gln Glu Glu		
195	200	205
His Ile Glu Trp Ala Lys Lys Asn Thr Ala Arg Ala Tyr His Leu Gln		
210	215	220
Asp Asp Gly Thr Gln Thr Val Arg Met Val Ser His Phe Tyr Gly Asn		
225	230	235
Gly Asp Ile Cys Asp Ile Thr Asp Lys Pro Arg Gln Val Thr Val Lys		
245	250	255
Leu Lys Cys Lys Glu Ser Asp Ser Pro His Ala Val Thr Val Tyr Met		
260	265	270
Leu Glu Pro His Ser Cys Gln Tyr Ile Leu Gly Val Glu Ser Pro Val		
275	280	285
Ile Cys Lys Ile Leu Asp Thr Ala Asp Glu Asn Gly Leu Leu Ser Leu		
290	295	300
Pro Asn		
305		

&lt;210&gt; 3963

&lt;211&gt; 1513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3963

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120

ataaatccat ttgttaaaca gttttcaaac atcagttttt cgagagactc accagaggaa  
180

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360

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&lt;210&gt; 3964

&lt;211&gt; 436

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3964

Met	Ala	Met	Ala	Ser	Phe	Leu	Leu	Phe	Tyr	Phe	Thr	Lys	Gly	Met	Met
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			20					25				30			
Gln	Phe	Ser	Asn	Ile	Ser	Phe	Ser	Arg	Asp	Ser	Pro	Glu	Glu	Asn	Val
		35				40					45				
Gln	Ser	Asn	Lys	Met	Asp	Leu	Ser	Gly	Gly	Met	Leu	Gln	Asp	Lys	Arg

50						55						60							
Met	Glu	Ile	Asp	Lys	His	Ser	Leu	Asn	Ile	Gly	Asp	Tyr	Asn	Arg	Thr				
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Val	Gly	Lys	Gly	Pro	Gly	Ser	Arg	Pro	Gln	Ile	Ser	Lys	Glu	Ser	Ser				
				85					90					95					
Met	Glu	Arg	Asn	Pro	Tyr	Phe	Asp	Lys	Asn	Gly	Asn	Pro	Ser	Met	Phe				
			100					105					110						
Gly	Val	Gly	Asn	Thr	Ala	Ala	Gln	Pro	Arg	Gly	Met	Gln	Gln	Pro	Pro				
		115					120					125							
Ala	Gln	Pro	Leu	Ser	Ser	Ser	Gln	Pro	Asn	Leu	Arg	Ala	Gln	Val	Pro				
	130					135				140									
Pro	Pro	Leu	Leu	Ser	Pro	Gln	Val	Pro	Val	Ser	Leu	Leu	Lys	Tyr	Ala				
145				150					155					160					
Pro	Asn	Asn	Gly	Gly	Leu	Asn	Pro	Leu	Phe	Gly	Pro	Gln	Gln	Val	Ala				
			165					170					175						
Met	Leu	Asn	Gln	Leu	Ser	Gln	Leu	Asn	Gln	Leu	Ser	Gln	Ile	Ser	Gln				
		180					185					190							
Leu	Gln	Arg	Leu	Leu	Ala	Gln	Gln	Gln	Arg	Ala	Gln	Ser	Gln	Arg	Ser				
	195					200					205								
Val	Pro	Ser	Gly	Asn	Arg	Pro	Gln	Gln	Asp	Gln	Gln	Gly	Arg	Pro	Leu				
	210					215				220									
Ser	Val	Gln	Gln	Gln	Met	Met	Gln	Gln	Ser	Arg	Gln	Leu	Asp	Pro	Asn				
225				230					235					240					
Leu	Leu	Val	Lys	Gln	Gln	Thr	Pro	Pro	Ser	Gln	Gln	Gln	Pro	Leu	His				
			245						250					255					
Gln	Pro	Ala	Met	Lys	Ser	Phe	Leu	Asp	Asn	Val	Met	Pro	His	Thr	Thr				
		260						265				270							
Pro	Glu	Leu	Gln	Lys	Gly	Pro	Ser	Pro	Ile	Asn	Ala	Phe	Ser	Asn	Phe				
	275					280					285								
Pro	Ile	Gly	Leu	Asn	Ser	Asn	Leu	Asn	Val	Asn	Met	Asp	Met	Asn	Ser				
	290				295					300									
Ile	Lys	Glu	Pro	Gln	Ser	Arg	Leu	Arg	Lys	Trp	Thr	Thr	Val	Asp	Ser				
305				310					315					320					
Ile	Ser	Val	Asn	Thr	Ser	Leu	Asp	Gln	Asn	Ser	Ser	Lys	His	Gly	Ala				
			325					330						335					
Ile	Ser	Ser	Gly	Phe	Arg	Leu	Glu	Glu	Ser	Pro	Phe	Val	Pro	Tyr	Asp				
		340					345					350							
Phe	Met	Asn	Ser	Ser	Thr	Ser	Pro	Ala	Ser	Pro	Pro	Gly	Ser	Ile	Gly				
	355					360					365								
Asp	Gly	Trp	Pro	Arg	Ala	Lys	Ser	Pro	Asn	Gly	Ser	Ser	Ser	Val	Asn				
	370				375					380									
Trp	Pro	Pro	Glu	Phe	Arg	Pro	Gly	Glu	Pro	Trp	Lys	Gly	Tyr	Pro	Asn				
385				390					395					400					
Ile	Asp	Pro	Glu	Thr	Asp	Pro	Tyr	Val	Thr	Pro	Gly	Ser	Val	Ile	Asn				
			405					410					415						
Asn	Leu	Pro	Ile	Asn	Thr	Val	Arg	Glu	Val	Asp	His	Leu	Arg	Asp	Arg				
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Asn	Ser	Gly	Thr																
	435																		

&lt;210&gt; 3965

&lt;211&gt; 2850

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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120  
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180  
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240  
ggggaggccg ggccccggag gacgaggaa agcaggccgg gcgccgtgag cttcgcgga  
300  
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360  
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420  
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480  
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540  
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900  
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1560

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 2460  
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 2580  
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 2700  
 agtgccctgta aagattcgaa tagattagac ttgccacca tctccccagt cttttgttta  
 2760  
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 2820  
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 2850

&lt;210&gt; 3966

&lt;211&gt; 782

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3966

Met Gly Pro Pro Leu Ala Pro Arg Pro Ala His Val Pro Gly Glu Ala  
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 Gly Pro Arg Arg Thr Arg Glu Ser Arg Pro Gly Ala Val Ser Phe Ala

[illegible]



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 Gly Pro Tyr Ile Phe Leu Glu Gly Lys Lys Pro Leu Leu Tyr Phe Pro  
 465                      470                      475                      480  
 Asp Thr Pro Pro Pro Pro Leu Glu Lys Ala Ala Glu Ala Ala Leu Phe  
                     485                      490                      495  
 Lys Gly Lys Trp Asp Asp Glu Ala Arg Glu Met Ala Pro Pro Pro Ala  
                     500                      505                      510  
 Pro Leu Leu Ala Pro Arg Pro Gly Glu Thr Arg Pro Gly Cys Arg Lys  
                     515                      520                      525  
 Pro Gly Thr Val Ser Phe Ala Asp Val Ala Val Tyr Phe Ser Pro Glu  
                     530                      535                      540  
 Glu Trp Gly Cys Leu Arg Pro Ala Gln Arg Ala Leu Tyr Arg Asp Val  
 545                      550                      555                      560  
 Met Gln Glu Thr Tyr Gly His Leu Gly Ala Leu Gly Phe Pro Gly Pro  
                     565                      570                      575  
 Lys Pro Ala Leu Ile Ser Trp Met Glu Gln Glu Ser Glu Ala Trp Ser  
                     580                      585                      590  
 Pro Ala Ala Gln Asp Pro Glu Lys Gly Glu Arg Leu Gly Gly Ala Arg  
                     595                      600                      605  
 Arg Gly Asp Val Pro Asn Arg Lys Glu Glu Glu Pro Glu Glu Val Pro  
                     610                      615                      620  
 Arg Ala Lys Gly Pro Arg Lys Ala Pro Val Lys Glu Ser Pro Glu Val  
 625                      630                      635                      640  
 Leu Val Glu Arg Asn Pro Asp Pro Ala Ile Ser Val Ala Pro Ala Arg  
                     645                      650                      655  
 Ala Gln Pro Pro Lys Asn Ala Ala Trp Asp Pro Thr Thr Gly Ala Gln  
                     660                      665                      670  
 Pro Pro Ala Pro Ile Pro Ser Met Asp Ala Gln Ala Gly Gln Arg Arg  
                     675                      680                      685  
 His Val Cys Thr Asp Cys Gly Arg Arg Phe Thr Tyr Pro Ser Leu Leu  
                     690                      695                      700  
 Val Ser His Arg Arg Met His Ser Gly Glu Arg Pro Phe Pro Cys Pro  
 705                      710                      715                      720  
 Glu Cys Gly Met Arg Phe Lys Arg Lys Phe Ala Val Glu Ala His Gln  
                     725                      730                      735  
 Trp Ile His Arg Ser Cys Ser Gly Gly Arg Arg Gly Arg Arg Pro Gly  
                     740                      745                      750  
 Ile Arg Ala Val Pro Arg Ala Pro Val Arg Gly Asp Arg Asp Pro Pro  
                     755                      760                      765  
 Val Leu Phe Arg His Tyr Pro Asp Ile Phe Glu Glu Cys Gly  
                     770                      775                      780

&lt;210&gt; 3967

&lt;211&gt; 892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3967

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 120  
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 180

gccctggagg tggagtggca cctgctggcc caccacagca tcacagatgt ggctgtgatt  
 240  
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 300  
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 480  
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 660  
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 780  
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 840  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 892

&lt;210&gt; 3968

&lt;211&gt; 151

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3968

Xaa	Pro	Ala	Arg	Pro	Arg	Arg	Ala	Arg	Gly	Gly	Gly	Arg	Gly	Arg	Val
1				5					10					15	
Val	Ala	Arg	Gln	Ile	Leu	Pro	Arg	Gly	Arg	Gly	Arg	Leu	Val	Gly	Asp
			20						25					30	
Thr	Val	Val	Phe	Lys	Asp	Gly	Gln	Tyr	Trp	Ile	Arg	Gly	Arg	Thr	Ser
			35						40					45	
Val	Asp	Ile	Ile	Lys	Thr	Gly	Gly	Tyr	Lys	Val	Ser	Ala	Leu	Glu	Val
			50						55					60	
Glu	Trp	His	Leu	Leu	Ala	His	Pro	Ser	Ile	Thr	Asp	Val	Ala	Val	Ile
65						70				75					80
Gly	Val	Pro	Asp	Met	Thr	Trp	Gly	Gln	Arg	Val	Thr	Ala	Val	Val	Thr
				85					90						95
Leu	Arg	Glu	Gly	His	Ser	Leu	Ser	His	Arg	Glu	Leu	Lys	Glu	Trp	Ala
				100					105					110	
Arg	Asn	Val	Leu	Ala	Pro	Tyr	Ala	Val	Pro	Ser	Glu	Leu	Val	Leu	Val
				115					120					125	
Glu	Glu	Ile	Pro	Arg	Asn	Gln	Met	Gly	Lys	Ile	Asp	Lys	Lys	Ala	Leu
			130				135					140			
Ile	Arg	His	Phe	His	Pro	Ser									
145						150									

&lt;210&gt; 3969

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3969

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 180  
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 660  
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 780  
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 900  
 aagaaaaaat atggc  
 915

&lt;210&gt; 3970

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3970

Met	Gly	Glu	Val	Glu	Ala	Pro	Gly	Arg	Leu	Trp	Leu	Glu	Ser	Pro	Pro
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Gly	Gly	Ala	Pro	Pro	Ile	Phe	Leu	Pro	Ser	Asp	Gly	Gln	Ala	Leu	Val
			20					25				30			
Leu	Gly	Arg	Gly	Pro	Leu	Thr	Gln	Val	Thr	Asp	Arg	Lys	Cys	Ser	Arg
			35				40					45			
Thr	Gln	Val	Glu	Leu	Val	Ala	Asp	Pro	Glu	Thr	Arg	Thr	Val	Ala	Val
			50			55					60				
Lys	Gln	Val	Ser	Val	Pro	Leu	Gln	Gly	Pro	Ala	Arg	Pro	Gly	Asp	Gly
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Ile	Trp	Gly	Gly	Ile	Ala	Ser	Arg	Gln							

85

<210> 3971  
 <211> 433  
 <212> DNA  
 <213> Homo sapiens

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 120  
 ctggggaacg ggtaatcaga gaaaccctca ctcatagggt ggtgcccttt atgcagagac  
 180  
 ttaaaggaag gaggagggtc ccctgacaga gagaatggta agtgcaaagg tcctgggtgg  
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 ctaatcacca gaa  
 433

<210> 3972  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 3972  
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 Trp Pro Cys Ser Ser Ser Thr Gln Ala His Pro Gly Pro Leu His Leu  
 35 40 45  
 Pro Phe Ser Leu Ser Gly Asp Leu Pro Pro Ser Phe Lys Ser Leu His  
 50 55 60  
 Lys Gly His His Pro Met Ser Glu Gly Phe Ser Asp Tyr Pro Phe Pro  
 65 70 75 80  
 Ser Arg Ala Leu Pro Ser Met Leu His Phe Phe Pro Arg Ala Leu Asn  
 85 90 95  
 Thr Thr Tyr Leu Ser Phe Ile Phe Ser Leu Ser Phe Phe Cys Leu Leu  
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 115 120

<210> 3973  
 <211> 984  
 <212> DNA  
 <213> Homo sapiens

<400> 3973

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 120  
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 240  
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<210> 3974

<211> 328

<212> PRT

<213> Homo sapiens

<400> 3974

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			20					25					30		
Ala	Ser	His	Val	Ser	Lys	Ala	Val	Cys	Ser	Thr	Tyr	Leu	Gln	Ser	Arg
		35					40					45			
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65					70				75				80		
Trp	Pro	Leu	Tyr	Pro	Gly	Ala	Ser	Glu	Tyr	Asp	Gln	Ile	Arg	Tyr	Ile
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Ser	Gln	Thr	Gln	Gly	Leu	Pro	Ala	Glu	Tyr	Leu	Leu	Ser	Ala	Gly	Thr

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Lys Thr Thr Arg Phe Phe Asn Arg Asp Thr Asp Ser Pro Tyr Pro Leu		
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Trp Arg Leu Lys Thr Pro Asp Asp His Glu Ala Glu Thr Gly Ile Lys		
130	135	140
Ser Lys Glu Ala Arg Lys Tyr Ile Phe Asn Cys Leu Asp Asp Met Ala		
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Gln Val Asn Met Thr Thr Asp Leu Glu Gly Ser Asp Met Leu Val Glu		
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Lys Ala Asp Arg Arg Glu Phe Ile Asp Leu Leu Lys Lys Met Leu Thr		
180	185	190
Ile Asp Ala Asp Lys Arg Ile Thr Pro Ile Glu Thr Leu Asn His Pro		
195	200	205
Phe Val Thr Met Thr His Leu Leu Asp Phe Pro His Ser Thr His Val		
210	215	220
Lys Ser Cys Phe Gln Asn Met Glu Ile Cys Lys Arg Arg Val Asn Met		
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Tyr Asp Thr Val Asn Gln Ser Lys Thr Pro Phe Ile Thr His Val Ala		
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Pro Ser Thr Ser Thr Asn Leu Thr Met Thr Phe Asn Asn Gln Leu Thr		
260	265	270
Thr Val His Asn Gln Pro Ser Ala Ala Ser Met Ala Ala Ala Gln		
275	280	285
Arg Ser Met Pro Leu Gln Thr Gly Thr Ala Gln Ile Cys Ala Arg Pro		
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Asp Pro Phe Gln Gln Ala Leu Ile Val Cys Pro Pro Gly Leu Gln Ala		
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325		

&lt;210&gt; 3975

&lt;211&gt; 593

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3975

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<210> 3976

<211> 101

<212> PRT

<213> Homo sapiens

<400> 3976

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			20					25					30		
Leu	Lys	Gly	Ala	Trp	Ala	Ser	Ala	Ser	Leu	Gln	Ala	Ala	Ser	Asn	Ser
		35				40					45				
Gln	Ser	Gly	Phe	Gly	Cys	Pro	Gln	Cys	Ser	Pro	Glu	Ala	Ala	Ala	Pro
	50					55					60				
His	Pro	Thr	Ile	Leu	Leu	Arg	Arg	Leu	Gly	Ile	Ile	Gly	Leu	Pro	
65				70				75					80		
Trp	Lys	Gly	Ser	Ser	Arg	Arg	Gly	Leu	Arg	Glu	Pro	His	Arg	Cys	Pro
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<210> 3977

<211> 2668

<212> DNA

<213> Homo sapiens

<400> 3977

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<210> 3978

<211> 667

<212> PRT

<213> Homo sapiens

<400> 3978

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			20					25					30		
Phe	Leu	His	Pro	Ser	Glu	Thr	Ser	Val	Leu	Asn	Arg	Leu	Cys	Arg	Leu
		35					40				45				
Gly	Thr	Asp	Tyr	Ile	Arg	Phe	Thr	Glu	Phe	Ile	Glu	Gln	Tyr	Thr	Gly
	50					55				60					
His	Val	Gln	Gln	Gln	Asp	His	His	Pro	Ser	Gln	Gln	Gly	Gln	Gly	Gly
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Leu	His	Gly	Ile	Tyr	Leu	Arg	Ala	Phe	Cys	Thr	Gly	Leu	Asp	Ser	Val
				85					90					95	
Leu	Gln	Pro	Tyr	Arg	Gln	Ala	Leu	Leu	Asp	Leu	Glu	Gln	Glu	Phe	Leu
		100						105					110		
Gly	Asp	Pro	His	Leu	Ser	Ile	Ser	His	Val	Asn	Tyr	Phe	Leu	Asp	Gln
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Ser	Gln	Lys	Ile	His	Gly	Cys	Gln	Ile	Leu	Glu	Thr	Val	Tyr	Lys	His
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			165					170						175	
Ala	Val	Cys	His	Gly	Val	Met	Tyr	Lys	Gln	Leu	Ser	Ala	Trp	Met	Leu
		180						185					190		
His	Gly	Leu	Leu	Leu	Asp	Gln	His	Glu	Glu	Phe	Phe	Ile	Lys	Gln	Gly
	195						200					205			
Pro	Ser	Ser	Gly	Asn	Val	Ser	Ala	Gln	Pro	Glu	Glu	Asp	Glu	Glu	Asp
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Leu	Gly	Ile	Gly	Gly	Leu	Thr	Gly	Lys	Gln	Leu	Arg	Glu	Leu	Gln	Asp
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			245					250					255		
Phe	Ser	Leu	Arg	Val	Glu	Ile	Leu	Pro	Ser	Tyr	Ile	Pro	Val	Arg	Val
	260						265					270			
Ala	Glu	Lys	Ile	Leu	Phe	Val	Gly	Glu	Ser	Val	Gln	Met	Phe	Glu	Asn

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 Ser Leu Val Asp Phe Glu Gln Val Val Asp Arg Ile Arg Ser Thr Val  
 325                      330                      335  
 Ala Glu His Leu Trp Lys Leu Met Val Glu Glu Ser Asp Leu Leu Gly  
 340                      345                      350  
 Gln Leu Lys Ile Ile Lys Asp Phe Tyr Leu Leu Gly Arg Gly Glu Leu  
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 Phe Gln Ala Phe Ile Asp Thr Ala Gln His Met Leu Lys Thr Pro Pro  
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 Thr Ala Val Thr Glu His Asp Val Asn Val Ala Phe Gln Gln Ser Ala  
 385                      390                      395                      400  
 His Lys Val Leu Leu Asp Asp Asp Asn Leu Leu Pro Leu Leu His Leu  
 405                      410                      415  
 Thr Ile Glu Tyr His Xaa Glu Arg Ser Thr Lys Met Leu Leu Arg Xaa  
 420                      425                      430  
 Arg Glu Gly Pro Ser Arg Glu Thr Ser Pro Arg Glu Ala Pro Ala Ser  
 435                      440                      445  
 Gly Trp Ala Ala Leu Gly Leu Ser Tyr Lys Val Gln Trp Pro Leu His  
 450                      455                      460  
 Ile Leu Phe Thr Pro Ala Val Leu Glu Lys Tyr Asn Val Val Phe Lys  
 465                      470                      475                      480  
 Tyr Leu Leu Ser Val Arg Arg Val Gln Ala Glu Leu Gln His Cys Trp  
 485                      490                      495  
 Ala Leu Gln Met Gln Arg Lys His Leu Lys Ser Asn Gln Thr Asp Ala  
 500                      505                      510  
 Ile Lys Trp Arg Leu Arg Asn His Met Ala Phe Leu Val Asp Asn Leu  
 515                      520                      525  
 Gln Tyr Tyr Leu Gln Val Asp Val Leu Glu Ser Gln Phe Ser Gln Leu  
 530                      535                      540  
 Leu His Gln Ile Asn Ser Thr Arg Asp Phe Glu Ser Ile Arg Leu Ala  
 545                      550                      555                      560  
 His Asp His Phe Leu Ser Asn Leu Leu Ala Gln Ser Phe Ile Leu Leu  
 565                      570                      575  
 Lys Pro Val Phe His Cys Leu Asn Glu Ile Leu Asp Leu Cys His Ser  
 580                      585                      590  
 Phe Cys Ser Leu Val Ser Gln Asn Leu Gly Pro Leu Asp Glu Arg Gly  
 595                      600                      605  
 Ala Ala Gln Leu Ser Ile Leu Val Lys Gly Phe Ser Arg Gln Ser Ser  
 610                      615                      620  
 Leu Leu Phe Lys Ile Leu Ser Ser Val Arg Asn His Gln Ile Asn Ser  
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 Asp Leu Ala Gln Leu Leu Leu Arg Leu Asp Tyr Asn Lys Tyr Tyr Thr  
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&lt;210&gt; 3979

&lt;211&gt; 2746

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3979

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<210> 3980

<211> 478

<212> PRT

<213> Homo sapiens

<400> 3980

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			20					25				30			
Val	Ile	Phe	Leu	Leu	Phe	Met	Asn	Leu	Tyr	Ile	Glu	Asp	Ser	Tyr	Val
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Asn Ser Glu Arg Tyr Val His Thr Phe Lys Asp Leu Ser Asn Phe Ser				
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Gly Ala Ile Asn Val Thr Tyr Arg Tyr Leu Ala Ala Thr Pro Leu Gln				
	85	90	95	
Arg Lys Arg Tyr Leu Thr Ile Gly Leu Ser Ser Val Lys Arg Lys Lys				
	100	105	110	
Gly Asn Tyr Leu Leu Glu Thr Ile Lys Ser Ile Phe Glu Gln Ser Ser				
	115	120	125	
Tyr Glu Glu Leu Lys Glu Ile Ser Val Val Val His Leu Ala Asp Phe				
	130	135	140	
Asn Ser Ser Trp Arg Asp Ala Met Val Gln Asp Ile Thr Gln Lys Phe				
145	150	155	160	
Ala His His Ile Ile Ala Gly Arg Leu Met Val Ile His Ala Pro Glu				
	165	170	175	
Glu Tyr Tyr Pro Ile Leu Asp Gly Leu Lys Arg Asn Tyr Asn Asp Pro				
	180	185	190	
Glu Asp Arg Val Lys Phe Arg Ser Lys Gln Asn Val Asp Tyr Ala Phe				
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Ala His Phe Leu Leu Met Phe Tyr Gln Glu Met Pro Cys Asp Trp Leu				
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<213> Homo sapiens

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&lt;210&gt; 3982

&lt;211&gt; 929

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 3982

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 Lys Gln Ile Gly Tyr Leu Phe Ile Ser Val Leu Val Asn Ser Asn Ser  
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&lt;211&gt; 2300

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3983

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&lt;210&gt; 3984

&lt;211&gt; 484

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3984

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Phe Thr Phe Glu

470

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<213> Homo sapiens

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<212> PRT

<213> Homo sapiens

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&lt;210&gt; 3989

&lt;211&gt; 4522

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3989

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<211> 955

<212> PRT

<213> Homo sapiens

<400> 3990

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				245					250					255	
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Ala	Ala	Ser	Gly	Gly	Ala	Ala	Tyr	Thr	Lys	Arg	Tyr	Leu	Glu	Glu	Gln
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 Lys Pro Phe Arg Gly Ser Gln Ser Pro Lys Arg Tyr Lys Leu Arg Asp  
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 Glu Pro Lys Phe Met Ser Lys Val Ile Gly Ala Asn Lys Asn Gln Glu  
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<213> Homo sapiens

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<210> 3992

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Val Val Asn Ser Gln Tyr Gly Thr Gln Pro Gln Gln Tyr Pro Pro Ile
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&lt;210&gt; 3993

&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3993

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&lt;210&gt; 3994

&lt;211&gt; 72

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3994

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&lt;211&gt; 715

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3995

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&lt;210&gt; 3996

&lt;211&gt; 235

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 3996

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&lt;210&gt; 3999

&lt;211&gt; 2546

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3999

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&lt;210&gt; 4000

&lt;211&gt; 606

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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35 40 45  
Glu Cys Pro Asp Glu Ser Phe Ile Gln Pro Ile Cys Glu Asn Ala Thr  
50 55 60  
Phe Gln Arg Tyr Gln Gly Lys Ala Asp Ala Pro Val Ala Leu Val Val  
65 70 75 80  
His Met Ala Pro Ala Ser Val Leu Val Asp Ser Arg Tyr Gln Gln Trp  
85 90 95  
Met Glu Arg Phe Gly Pro Asp Thr Gln His Leu Val Leu Asn Glu Asn  
100 105 110  
Cys Ala Ser Val His Asn Leu Arg Ser His Lys Ile Gln Thr Gln Leu  
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Asn Leu Ile His Pro Asp Ile Phe Pro Leu Leu Thr Ser Phe Arg Cys  
130 135 140  
Lys Lys Glu Gly Pro Thr Leu Ser Val Pro Met Val Gln Gly Glu Cys  
145 150 155 160  
Leu Leu Lys Tyr Gln Leu Arg Pro Arg Arg Glu Trp Gln Arg Asp Ala  
165 170 175  
Ile Ile Thr Cys Asn Pro Glu Glu Phe Ile Val Glu Ala Leu Gln Leu  
180 185 190  
Pro Asn Phe Gln Gln Ser Val Gln Glu Tyr Arg Arg Ser Ala Gln Asp  
195 200 205  
Gly Pro Ala Pro Ala Glu Lys Arg Ser Gln Tyr Pro Glu Ile Ile Phe  
210 215 220  
Leu Gly Thr Gly Ser Ala Ile Pro Met Lys Ile Arg Asn Val Ser Ala  
225 230 235 240  
Thr Leu Val Asn Ile Ser Pro Asp Thr Ser Leu Leu Leu Asp Cys Gly  
245 250 255  
Glu Gly Thr Phe Gly Gln Leu Cys Arg His Tyr Gly Asp Gln Val Asp  
260 265 270  
Arg Val Leu Gly Thr Leu Ala Ala Val Phe Val Ser His Leu His Ala  
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Asp His His Thr Gly Leu Pro Ser Ile Leu Leu Gln Arg Glu Arg Ala  
290 295 300  
Leu Ala Ser Leu Gly Lys Pro Leu His Pro Leu Leu Val Val Ala Pro  
305 310 315 320  
Asn Gln Leu Lys Ala Trp Leu Gln Gln Tyr His Asn Gln Cys Gln Glu  
325 330 335  
Val Leu His His Ile Ser Met Ile Pro Ala Lys Cys Leu Gln Glu Gly  
340 345 350  
Ala Glu Ile Ser Ser Pro Ala Val Glu Arg Leu Ile Ser Ser Leu Leu  
355 360 365  
Arg Thr Cys Asp Leu Glu Glu Phe Gln Thr Cys Leu Val Arg His Cys  
370 375 380  
Lys His Ala Phe Gly Cys Ala Leu Val His Thr Ser Gly Trp Lys Val  
385 390 395 400  
Val Tyr Ser Gly Asp Thr Met Pro Cys Glu Ala Leu Val Arg Met Gly  
405 410 415  
Lys Asp Ala Thr Leu Leu Ile His Glu Ala Thr Leu Glu Asp Gly Leu

420 425 430  
 Glu Glu Glu Ala Val Glu Lys Thr His Ser Thr Thr Ser Gln Ala Ile  
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 Ser Gln Arg Tyr Ala Lys Val Pro Leu Phe Ser Pro Asn Phe Ser Glu  
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 Pro Thr Met Pro Lys Leu Ile Pro Pro Thr Glu Ser Pro Val Cys Trp  
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 545 550 555 560  
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&lt;210&gt; 4001

&lt;211&gt; 1251

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4001

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&lt;210&gt; 4002

&lt;211&gt; 417

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4002

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Leu	Ser	Asp	Ser	Leu	Gly	Val	Ser	Val	Met	Ala	Thr	Asp	Gln	Asp	Ser
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Tyr	Ser	Thr	Ser	Ser	Thr	Glu	Glu	Leu	Glu	Gln	Phe	Ser	Ser	Pro	
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Ser	Val	Lys	Lys	Lys	Pro	Ser	Met	Ile	Leu	Gly	Lys	Ala	Arg	His	Arg
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Leu	Ser	Phe	Ala	Ser	Phe	Ser	Ser	Met	Phe	His	Ala	Phe	Leu	Ser	Asn
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Asn	Arg	Lys	Leu	Tyr	Lys	Lys	Val	Val	Glu	Leu	Ala	Gln	Asp	Lys	Gly
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Ser	Tyr	Phe	Gly	Ser	Leu	Val	Gln	Asp	Tyr	Lys	Val	Tyr	Ser	Leu	Glu
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Met	Met	Ala	Arg	Gln	Thr	Ser	Ser	Thr	Glu	Met	Leu	Gln	Glu	Ile	Arg
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Thr	Met	Met	Thr	Gln	Leu	Lys	Ser	Tyr	Leu	Leu	Gln	Ser	Thr	Glu	Leu
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Lys	Ala	Leu	Val	Asp	Pro	Ala	Leu	His	Ser	Glu	Glu	Glu	Leu	Glu	Ala
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Ile	Val	Glu	Ser	Ala	Leu	Tyr	Lys	Cys	Val	Leu	Lys	Pro	Leu	Lys	Glu
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Ala	Ile	Asn	Ser	Cys	Leu	His	Gln	Ile	His	Ser	Lys	Asp	Gly	Ser	Leu
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 Ala Leu Gly Asn Pro Gly Lys Pro Tyr Gly Ala Asp Asp Phe Leu Pro  
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 Val Leu Met Tyr Val Leu Ala Arg Ser Asn Leu Thr Glu Met Leu Leu  
                                  290                      295                      300  
 Asn Val Glu Tyr Met Met Glu Leu Met Asp Pro Ala Leu Gln Leu Gly  
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 Glu Gly Ser Tyr Tyr Leu Thr Thr Thr Tyr Gly Ala Leu Glu His Ile  
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 Lys Ser Tyr Asp Lys Ile Thr Val Thr Arg Gln Leu Ser Val Glu Val  
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 Gln Asp Ser Ile His Arg Trp Glu Arg Arg Arg Thr Leu Asn Lys Ala  
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 Arg Ala Ser Arg Ser Ser Val Gln Asp Phe Ile Cys Val Ser Tyr Leu  
                                  370                                   375                                   380  
 Glu Pro Glu Gln Gln Ala Arg Thr Leu Ala Ser Arg Ala Asp Thr Gln  
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<211> 581

<212> DNA

<213> Homo sapiens

<400> 4003

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 <212> PRT  
 <213> Homo sapiens

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 <212> DNA  
 <213> Homo sapiens

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<400> 4006

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		20						25					30		
Met	Met	Lys	Ala	Ala	Ile	Ser	Glu	Thr	Glu	Asp	Met	Pro	Met	Phe	Glu
		35					40					45			
Pro	Lys	Met	Thr	Arg	Ser	Lys	Leu	Lys	Glu	Val	Val	Glu	Lys	Gly	Met
		50				55					60				
Val	Ile	Pro	Thr	Trp	Asn	Ile	Ser	Pro	Ile	Lys	Lys	Ala	Asn	Glu	Ile
65					70				75					80	
Lys	Pro	Pro	Gln	Phe	Val	Asp	Ile	His	Leu	Glu	Glu	Asp	Asp	Ser	Ser
			85						90					95	
Asp	Glu	Glu	Tyr	Gln	Pro	Asp	Asp	Glu	Glu	Glu	Asp	Glu	Thr	Ala	Glu
			100					105					110		
Glu	Ser	Leu	Leu	Glu	Ser	Asp	Val	Glu	Ser	Thr	Ala	Ser	Ser	Pro	Arg
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 Lys Gln Val Arg Asp Thr Leu Ala Ala Ile Ser Glu Val Leu Tyr Val  
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<211> 419

<212> PRT

<213> Homo sapiens

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&lt;210&gt; 4014

&lt;211&gt; 473

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4014

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			20					25					30		
Thr	Pro	Ala	Leu	Gln	Pro	Leu	Ser	Arg	Ala	Ser	Pro	Ile	Pro	Gly	Thr
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Ser	Gly	Pro	Trp	Arg	Pro	Gln	Val	Gly	Tyr	Asp	Gly	Cys	Gln	Ser	Pro
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Arg	Glu	Arg	Glu	Asp	Thr	Met	Glu	Ala	Ser	Arg	His	Pro	Glu	Thr	Lys
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&lt;211&gt; 823

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4015

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&lt;210&gt; 4016

&lt;211&gt; 95

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4016

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&lt;210&gt; 4017

&lt;211&gt; 1521

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4017

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&lt;210&gt; 4018

&lt;211&gt; 480

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4018

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 Ser Ser Ser Val Asp Phe Asp Gln Arg Asp Asn Gly Phe Cys Ser Trp  
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<211> 2408

<212> DNA

<213> Homo sapiens

<400> 4019

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&lt;210&gt; 4020

&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4020

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    115                                      120                                      125  
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 Ser Thr Ser Pro Ala Pro Thr Thr Val Pro Glu Ala Pro Gly Pro Leu  
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&lt;210&gt; 4021

&lt;211&gt; 4209

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4021

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<211> 885

<212> PRT

<213> Homo sapiens

<400> 4022

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Phe	Ser	Leu	Gln	Tyr	Pro	His	Phe	Leu	Lys	Arg	Asp	Ala	Asn	Lys	Leu
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 Thr Thr His Gln Leu Pro Val Ala Glu Ala Met Leu Thr Cys Arg His  
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 Gly Asp Asp Ser Pro Val Val Ser Leu Thr Val Pro Ser Thr Ser Pro  
 690                      695                      700  
 Pro Ser Ser Ser Gly Leu Ser Arg Asp Ala Thr Ala Thr Pro Pro Ser  
 705                      710                      715                      720  
 Ser Pro Ser Met Ser Ser Ala Leu Ala Ile Val Gly Ser Pro Asn Ser  
 725                      730                      735  
 Pro Tyr Gly Asp Val Ile Gly Leu Gln Val Asp Tyr Trp Leu Gly His  
 740                      745                      750  
 Pro Gly Glu Arg Arg Arg Glu Gly Asp Lys Arg Asp Ala Ser Ser Lys  
 755                      760                      765  
 Asn Thr Leu Lys Ser Val Phe Arg Ser Val Gln Val Ser Arg Leu Pro  
 770                      775                      780  
 His Ser Gly Glu Ala Gln Leu Ser Gly Thr Met Ala Met Thr Val Val  
 785                      790                      795                      800  
 Thr Lys Glu Lys Asn Lys Lys Val Pro Thr Ile Phe Leu Ser Lys Lys  
 805                      810                      815  
 Pro Arg Glu Lys Glu Val Asp Ser Lys Ser Gln Val Ile Glu Gly Ile  
 820                      825                      830  
 Ser Arg Leu Ile Cys Ser Ala Lys Gln Gln Gln Thr Met Leu Arg Val  
 835                      840                      845  
 Ser Ile Asp Gly Val Glu Trp Ser Asp Ile Lys Phe Phe Gln Leu Ala  
 850                      855                      860  
 Ala Gln Trp Pro Thr His Val Lys His Phe Pro Val Gly Leu Phe Ser  
 865                      870                      875                      880  
 Gly Ser Lys Ala Thr  
 885

&lt;210&gt; 4023

&lt;211&gt; 5193

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4023

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 gacaacatca tctatgtcta caagattgga gaagattggg gtgacaagaa agtcatctgc  
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 aacaagttca tccagacgag tgctgtcact tgtctgcaat ggccggcaga atacatcatt  
 180  
 gtctttggac tggctgaagg gaaggttcgt ttagcaaaca ccaaaactaa taaatcatct  
 240  
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 480  
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 600

aactggatcc ctccaagaag catctgggaa gaggcaaagc ccaaggagat taccaattta  
660  
tacaccatca ctgccttggc ctggaagcgg gatggctcac ggctctgtgt gggcacacta  
720  
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780  
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840  
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900  
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1620  
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1680  
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1740  
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1920  
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1980  
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2040  
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2100  
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2160  
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2220

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2280  
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2340  
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2460  
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2580  
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2640  
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2760  
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2880  
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3000  
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3540  
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3600  
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3720  
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3840

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3960  
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4080  
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4860  
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5160  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa  
5193

&lt;210&gt; 4024

&lt;211&gt; 1690

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4024

Xaa Arg Val Lys Gly Met Ala Phe Ser Pro Asp Ser Thr Lys Ile Ala

1	5	10	15
Ile Gly Gln Thr Asp Asn Ile Ile Tyr Val Tyr Lys Ile Gly Glu Asp			
20	25	30	
Trp Gly Asp Lys Lys Val Ile Cys Asn Lys Phe Ile Gln Thr Ser Ala			
35	40	45	
Val Thr Cys Leu Gln Trp Pro Ala Glu Tyr Ile Ile Val Phe Gly Leu			
50	55	60	
Ala Glu Gly Lys Val Arg Leu Ala Asn Thr Lys Thr Asn Lys Ser Ser			
65	70	75	80
Thr Ile Tyr Gly Thr Glu Ser Tyr Val Val Ser Leu Thr Thr Asn Cys			
85	90	95	
Ser Gly Lys Gly Ile Leu Ser Gly His Ala Asp Gly Thr Ile Val Arg			
100	105	110	
Tyr Phe Phe Asp Asp Glu Gly Ser Gly Glu Ser Gln Gly Lys Leu Val			
115	120	125	
Asn His Pro Cys Pro Pro Tyr Ala Leu Ala Trp Ala Thr Asn Ser Ile			
130	135	140	
Val Ala Ala Gly Cys Asp Arg Lys Ile Val Ala Tyr Gly Lys Glu Gly			
145	150	155	160
His Met Leu Gln Thr Phe Asp Tyr Ser Arg Asp Pro Gln Glu Arg Glu			
165	170	175	
Phe Thr Thr Ala Val Ser Ser Pro Gly Gly Gln Ser Val Val Leu Gly			
180	185	190	
Ser Tyr Asp Arg Leu Arg Val Phe Asn Trp Ile Pro Arg Arg Ser Ile			
195	200	205	
Trp Glu Glu Ala Lys Pro Lys Glu Ile Thr Asn Leu Tyr Thr Ile Thr			
210	215	220	
Ala Leu Ala Trp Lys Arg Asp Gly Ser Arg Leu Cys Val Gly Thr Leu			
225	230	235	240
Cys Gly Gly Val Glu Gln Phe Asp Cys Cys Leu Arg Arg Ser Ile Tyr			
245	250	255	
Lys Asn Lys Phe Glu Leu Thr Tyr Val Gly Pro Ser Gln Val Ile Val			
260	265	270	
Lys Asn Leu Ser Ser Gly Thr Arg Val Val Leu Lys Ser His Tyr Gly			
275	280	285	
Tyr Glu Val Glu Glu Val Lys Ile Leu Gly Lys Glu Arg Tyr Leu Val			
290	295	300	
Ala His Thr Ser Glu Thr Leu Leu Leu Gly Asp Leu Asn Thr Asn Arg			
305	310	315	320
Leu Ser Glu Ile Ala Trp Gln Gly Ser Gly Gly Asn Glu Lys Tyr Phe			
325	330	335	
Phe Glu Asn Glu Asn Val Cys Met Ile Phe Asn Ala Gly Glu Leu Thr			
340	345	350	
Leu Val Glu Tyr Gly Asn Asn Asp Thr Leu Gly Ser Val Arg Thr Glu			
355	360	365	
Phe Met Asn Pro His Leu Ile Ser Val Arg Ile Asn Glu Arg Cys Gln			
370	375	380	
Arg Gly Thr Glu Asp Asn Lys Lys Leu Ala Tyr Leu Ile Asp Ile Lys			
385	390	395	400
Thr Ile Ala Ile Val Asp Leu Ile Gly Gly Tyr Asn Ile Gly Thr Val			
405	410	415	
Ser His Glu Ser Arg Val Asp Trp Leu Glu Leu Asn Glu Thr Gly His			
420	425	430	
Lys Leu Leu Phe Arg Asp Arg Lys Leu Arg Leu His Leu Tyr Asp Ile			

435 440 445  
 Glu Ser Cys Ser Lys Thr Met Ile Leu Asn Phe Cys Ser Tyr Met Gln  
 450 455 460  
 Trp Val Pro Gly Ser Asp Val Leu Val Ala Gln Asn Arg Asn Ser Leu  
 465 470 475 480  
 Cys Val Trp Tyr Asn Ile Glu Ala Pro Glu Arg Val Thr Met Phe Thr  
 485 490 495  
 Ile Arg Gly Asp Val Ile Gly Leu Glu Arg Gly Gly Gly Lys Thr Glu  
 500 505 510  
 Val Met Val Met Glu Gly Val Thr Val Ala Tyr Thr Leu Asp Glu  
 515 520 525  
 Gly Leu Ile Glu Phe Gly Thr Ala Ile Asp Asp Gly Asn Tyr Ile Arg  
 530 535 540  
 Ala Thr Ala Phe Leu Glu Thr Leu Glu Met Thr Pro Glu Thr Glu Ala  
 545 550 555 560  
 Met Trp Lys Thr Leu Ser Lys Leu Ala Leu Glu Ala Arg Gln Leu His  
 565 570 575  
 Ile Ala Glu Arg Cys Phe Ser Ala Leu Gly Gln Val Ala Lys Ala Arg  
 580 585 590  
 Phe Leu His Glu Thr Asn Glu Ile Ala Asp Gln Val Ser Arg Glu Tyr  
 595 600 605  
 Gly Gly Glu Gly Thr Asp Phe Tyr Gln Val Arg Ala Arg Leu Ala Met  
 610 615 620  
 Leu Glu Lys Asn Tyr Lys Leu Ala Glu Met Ile Phe Leu Glu Gln Asn  
 625 630 635 640  
 Ala Val Glu Glu Ala Met Gly Met Tyr Gln Glu Leu His Arg Trp Asp  
 645 650 655  
 Glu Cys Ile Ala Val Ala Glu Ala Lys Gly His Pro Ala Leu Glu Lys  
 660 665 670  
 Leu Arg Arg Ser Tyr Tyr Gln Trp Leu Met Asp Thr Gln Gln Glu Glu  
 675 680 685  
 Arg Ala Gly Glu Leu Gln Glu Ser Gln Gly Asp Gly Leu Ala Ala Ile  
 690 695 700  
 Ser Leu Tyr Leu Lys Ala Gly Leu Pro Ala Lys Ala Ala Arg Leu Val  
 705 710 715 720  
 Leu Thr Arg Glu Glu Leu Leu Ala Asn Thr Glu Leu Val Glu His Ile  
 725 730 735  
 Thr Ala Ala Leu Ile Lys Gly Glu Leu Tyr Glu Arg Ala Gly Asp Leu  
 740 745 750  
 Phe Glu Lys Ile His Asn Pro Gln Lys Ala Leu Glu Cys Tyr Arg Lys  
 755 760 765  
 Gly Asn Ala Phe Met Lys Ala Val Glu Leu Ala Arg Leu Ala Phe Pro  
 770 775 780  
 Val Glu Val Val Lys Leu Glu Glu Ala Trp Gly Asp His Leu Val Gln  
 785 790 795 800  
 Gln Lys Gln Leu Asp Ala Ala Ile Asn His Tyr Ile Glu Ala Arg Cys  
 805 810 815  
 Ser Ile Lys Ala Ile Glu Ala Ala Leu Gly Ala Arg Gln Trp Lys Lys  
 820 825 830  
 Ala Ile Tyr Ile Leu Asp Leu Gln Asp Arg Asn Thr Ala Ser Lys Tyr  
 835 840 845  
 Tyr Pro Leu Val Ala Gln His Tyr Ala Ser Leu Gln Glu Tyr Glu Ile  
 850 855 860  
 Ala Glu Glu Leu Tyr Thr Lys Gly Asp Arg Thr Lys Asp Ala Ile Asp



865		870		875		880
Met Tyr Thr Gln	Ala Gly Arg Trp	Glu Gln Ala His	Lys Leu Ala Met			
	885		890		895	
Lys Cys Met Arg	Pro Glu Asp Val	Ser Val Leu Tyr	Ile Thr Gln Ala			
	900		905		910	
Gln Glu Met Glu	Lys Gln Gly Lys	Tyr Arg Glu Ala	Glu Arg Leu Tyr			
	915		920		925	
Val Thr Val Gln	Glu Pro Asp Leu	Ala Ile Thr Met	Tyr Lys Lys His			
	930		935		940	
Lys Leu Tyr Asp	Asp Met Ile Arg	Leu Val Gly Lys	His His Pro Asp			
	945		950		955	
Leu Leu Ser Asp	Thr His Leu His	Leu Gly Lys Glu	Leu Glu Ala Glu			
	965		970		975	
Gly Arg Leu Gln	Glu Ala Glu Tyr	His Tyr Leu Glu	Ala Gln Glu Trp			
	980		985		990	
Lys Ala Thr Val	Asn Met Tyr Arg	Ala Ser Gly Leu	Trp Glu Glu Ala			
	995		1000		1005	
Tyr Arg Val Ala	Arg Thr Gln Gly	Gly Ala Asn Ala	His Lys His Val			
	1010		1015		1020	
Ala Tyr Leu Trp	Ala Lys Ser Leu	Gly Gly Glu Ala	Ala Val Arg Leu			
	1025		1030		1035	
Leu Asn Lys Leu	Gly Leu Leu Glu	Ala Ala Val Asp	His Ala Ala Asp			
	1045		1050		1055	
Asn Cys Ser Phe	Glu Phe Ala Phe	Glu Leu Ser Arg	Leu Ala Leu Lys			
	1060		1065		1070	
His Lys Thr Pro	Glu Val His Leu	Lys Tyr Ala Met	Phe Leu Glu Asp			
	1075		1080		1085	
Glu Gly Lys Phe	Glu Glu Ala Glu	Ala Glu Phe Ile	Arg Ala Gly Lys			
	1090		1095		1100	
Pro Lys Glu Ala	Val Leu Met Phe	Val His Asn Gln	Asp Trp Glu Ala			
	1105		1110		1115	
Ala Gln Arg Val	Ala Glu Ala His	Asp Pro Asp Ser	Val Ala Glu Val			
	1125		1130		1135	
Leu Val Gly Gln	Ala Arg Gly Ala	Leu Glu Glu Lys	Asp Phe Gln Lys			
	1140		1145		1150	
Ala Glu Gly Leu	Leu Leu Arg Ala	Gln Arg Pro Gly	Leu Ala Leu Asn			
	1155		1160		1165	
Tyr Tyr Lys Glu	Ala Gly Leu Trp	Ser Asp Ala Leu	Arg Ile Cys Lys			
	1170		1175		1180	
Asp Tyr Val Pro	Ser Gln Leu Glu	Ala Leu Gln Glu	Glu Tyr Glu Arg			
	1185		1190		1195	
Glu Ala Thr Lys	Lys Gly Ala Arg	Gly Val Glu Gly	Phe Val Glu Gln			
	1205		1210		1215	
Ala Arg His Trp	Glu Gln Ala Gly	Glu Tyr Ser Arg	Ala Val Asp Cys			
	1220		1225		1230	
Tyr Leu Lys Val	Arg Asp Ser Gly	Asn Ser Gly Leu	Ala Glu Lys Cys			
	1235		1240		1245	
Trp Met Lys Ala	Ala Glu Leu Ser	Ile Lys Phe Leu	Pro Pro Gln Arg			
	1250		1255		1260	
Asn Met Glu Val	Val Leu Ala Val	Gly Pro Gln Leu	Ile Gly Ile Gly			
	1265		1270		1275	
Lys His Ser Ala	Ala Ala Glu Leu	Tyr Leu Asn Leu	Asp Leu Val Lys			
	1285		1290		1295	
Glu Ala Ile Asp	Ala Phe Ile Glu	Gly Glu Glu Trp	Asn Lys Ala Lys			

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Arg Val Ala Lys Glu Leu Asp	Pro Arg Tyr Glu Asp Tyr Val Asp Gln	
1315	1320	1325
His Tyr Lys Glu Phe Leu Lys Asn Gln Gly Lys Val Asp Ser Leu Val		
1330	1335	1340
Gly Val Asp Val Ile Ala Ala Leu Asp Leu Tyr Val Glu Gln Gly Gln		
1345	1350	1355
Trp Asp Lys Cys Ile Glu Thr Ala Thr Lys Gln Asn Tyr Lys Ile Leu		
1365	1370	1375
His Lys Tyr Val Ala Leu Tyr Ala Thr His Leu Ile Arg Glu Gly Ser		
1380	1385	1390
Ser Ala Gln Ala Leu Ala Leu Tyr Val Gln His Gly Ala Pro Ala Asn		
1395	1400	1405
Pro Gln Asn Phe Asn Ile Tyr Lys Arg Ile Phe Thr Asp Met Val Ser		
1410	1415	1420
Ser Pro Gly Thr Asn Cys Ala Glu Ala Tyr His Ser Trp Ala Asp Leu		
1425	1430	1435
Arg Asp Val Leu Phe Asn Leu Ala Val Leu Ser Pro Ser Ser Ser Val		
1445	1450	1455
Lys Thr Trp Lys Ser Ser Glu Ala Asn Ser Pro Ala His Glu Glu Phe		
1460	1465	1470
Lys Thr Met Leu Leu Ile Ala His Tyr Tyr Ala Thr Arg Ser Ala Ala		
1475	1480	1485
Gln Ser Val Lys Gln Leu Glu Thr Val Ala Ala Arg Leu Ser Val Ser		
1490	1495	1500
Leu Leu Arg His Thr Gln Leu Leu Pro Val Asp Lys Ala Phe Tyr Glu		
1505	1510	1515
Ala Gly Ile Ala Ala Lys Ala Val Gly Trp Asp Asn Met Ala Phe Ile		
1525	1530	1535
Phe Leu Asn Arg Phe Leu Asp Leu Thr Asp Ala Ile Glu Glu Gly Thr		
1540	1545	1550
Leu Asp Gly Leu Asp His Ser Asp Phe Gln Asp Thr Asp Ile Pro Phe		
1555	1560	1565
Glu Val Pro Leu Pro Ala Lys Gln His Val Pro Glu Ala Glu Arg Glu		
1570	1575	1580
Glu Val Arg Asp Trp Val Leu Thr Val Ser Met Asp Gln Arg Leu Glu		
1585	1590	1595
Gln Val Leu Pro Arg Asp Glu Arg Gly Ala Tyr Glu Ala Ser Leu Val		
1605	1610	1615
Ala Ala Ser Thr Gly Val Arg Ala Leu Pro Cys Leu Ile Thr Gly Tyr		
1620	1625	1630
Pro Ile Leu Arg Asn Lys Ile Glu Phe Lys Arg Pro Gly Lys Ala Ala		
1635	1640	1645
Asn Lys Asp Asn Trp Asn Lys Phe Leu Met Ala Ile Lys Thr Ser His		
1650	1655	1660
Ser Pro Val Cys Gln Asp Val Leu Lys Phe Ile Ser Gln Trp Cys Gly		
1665	1670	1675
Gly Leu Pro Ser Thr Ser Phe Ser Phe Gln		
1685	1690	

&lt;210&gt; 4025

&lt;211&gt; 908

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4025

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 180  
 acgggggaga atcaccatga atgtaatcag tgtggaaaag ctttcagcac aaggctcctct  
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 360  
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 420  
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 780  
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 840  
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 900  
 tcagatct  
 908

&lt;210&gt; 4026

&lt;211&gt; 302

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4026

Leu	Arg	Thr	His	Thr	Gly	Xaa	Lys	Pro	Tyr	Glu	Cys	Asn	His	Cys	Gly
1				5					10					15	
Lys	Ala	Phe	Ser	Asp	Pro	Ser	Ser	Leu	Arg	Leu	His	Leu	Arg	Ile	His
			20					25					30		
Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys	Asn	Gln	Cys	Phe	His	Val	Phe	Arg
		35					40					45			
Thr	Ser	Cys	Asn	Leu	Lys	Ser	His	Lys	Arg	Ile	His	Thr	Gly	Glu	Asn
		50				55					60				
His	His	Glu	Cys	Asn	Gln	Cys	Gly	Lys	Ala	Phe	Ser	Thr	Arg	Ser	Ser
65					70					75				80	
Leu	Thr	Gly	His	Asn	Cys	Ile	His	Thr	Gly	Glu	Lys	Pro	Tyr	Glu	Cys
				85					90					95	
Lys	Glu	Cys	Gly	Lys	Thr	Phe	Met	Tyr	Asn	Ser	Ser	Leu	Ile	Gln	His

100	105	110
Leu Arg Thr His Thr Gly Glu Lys	Pro Tyr Glu Cys Lys Glu Cys Gly	
115	120	125
Lys Ala Phe Arg Gln His Ser His	Leu Val Thr His Gln Lys Ile His	
130	135	140
Thr Gly Glu Lys Pro Tyr Gln Cys	Thr Glu Cys Gly Lys Ala Phe Arg	
145	150	155
Arg Arg Ser Leu Leu Ile Gln His	Arg Arg Ile His Ser Gly Glu Lys	
165	170	175
Pro Tyr Glu Cys Lys Glu Cys Gly	Lys Leu Phe Ile Trp Arg Thr Ala	
180	185	190
Phe Leu Lys His Gln Ser Leu His	Ala Gly Glu Lys Leu Glu Glu Cys	
195	200	205
Glu Lys Xaa Pro Ser Ala Arg Met	Arg Ser Leu Gly Glu Xaa Gln Lys	
210	215	220
Ile His Gln Glu Glu Lys Ala Tyr	Trp Cys Asn Gln Cys Gly Arg Ala	
225	230	235
Phe Gln Gly Ser Ser Asp Leu Ile	Gly His Gln Val Thr His Thr Gly	
245	250	255
Glu Lys Pro Tyr Glu Cys Lys Glu	Cys Gly Xaa Thr Phe Asn Gln Ser	
260	265	270
Ser Asp Leu Leu Arg His His Arg	Ile His Ser Gly Glu Lys Pro Tyr	
275	280	285
Val Cys Asn Lys Cys Gly Lys Ser	Phe Arg Gly Ser Ser Asp	
290	295	300

&lt;210&gt; 4027

&lt;211&gt; 941

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4027

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120  
ggattgattc agatgggatg tgttttccag agcacagaag tgaaacacgt gaccaaggtg  
180  
gaatggatat tttcaggacg gcgcgcaaag gaggagattg tatttcgtta ctaccacaaa  
240  
ctcaggatgt ctgcgagta ctcccagagc tggggccact tccagaatcg tgtgaacctg  
300  
gtgggggaca ttttccgcaa tgacggttcc atcatgcttc aaggagttag ggagtcagat  
360  
ggaggaaact acacctgcag tatccaccta gggaacctgg tgttcaagaa aaccattgtg  
420  
ctgcatgtca gcccggaaga gcctcgaaca ctggtgaccc cggcagccct gaggcctctg  
480  
gtcttgggtg gtaatcagtt ggtgatcatt gtgggaattg tctgtgccac aatcctgctg  
540  
ctccctgttc tgatattgat cgtgaagaag acctgtggaa ataagagttc agtgaattct  
600  
acagtcttgg tgaagaacac gaagaagact aatccagaga tgaaagaaaa accctgccat  
660

tttgaaagat gtgaagggga ggtgaacaca cgcttcagcc taaaacacta agtagatgca  
 720  
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 780  
 caggccagtg cttggcacag agcaggggact caggaagcct ttgtcactaa agtaagagcc  
 840  
 tctgcggagt acagtgcattg gggtcgggctg ggacaccccc aggcagcaga tcctgggtatt  
 900  
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 941

<210> 4028

<211> 236

<212> PRT

<213> Homo sapiens

<400> 4028

Ala	Arg	Gln	Gly	Thr	Tyr	Ile	Cys	Glu	Ile	Arg	Leu	Lys	Gly	Glu	Ser
1				5					10					15	
Gln	Val	Phe	Lys	Lys	Ala	Val	Val	Leu	His	Val	Leu	Pro	Glu	Glu	Pro
			20					25					30		
Lys	Glu	Leu	Met	Val	His	Val	Gly	Gly	Leu	Ile	Gln	Met	Gly	Cys	Val
	35						40					45			
Phe	Gln	Ser	Thr	Glu	Val	Lys	His	Val	Thr	Lys	Val	Glu	Trp	Ile	Phe
	50					55					60				
Ser	Gly	Arg	Arg	Ala	Lys	Glu	Glu	Ile	Val	Phe	Arg	Tyr	Tyr	His	Lys
65					70					75				80	
Leu	Arg	Met	Ser	Ala	Glu	Tyr	Ser	Gln	Ser	Trp	Gly	His	Phe	Gln	Asn
				85				90						95	
Arg	Val	Asn	Leu	Val	Gly	Asp	Ile	Phe	Arg	Asn	Asp	Gly	Ser	Ile	Met
		100						105					110		
Leu	Gln	Gly	Val	Arg	Glu	Ser	Asp	Gly	Gly	Asn	Tyr	Thr	Cys	Ser	Ile
	115						120					125			
His	Leu	Gly	Asn	Leu	Val	Phe	Lys	Lys	Thr	Ile	Val	Leu	His	Val	Ser
	130					135					140				
Pro	Glu	Glu	Pro	Arg	Thr	Leu	Val	Thr	Pro	Ala	Ala	Leu	Arg	Pro	Leu
145					150					155				160	
Val	Leu	Gly	Gly	Asn	Gln	Leu	Val	Ile	Ile	Val	Gly	Ile	Val	Cys	Ala
				165				170						175	
Thr	Ile	Leu	Leu	Leu	Pro	Val	Leu	Ile	Leu	Ile	Val	Lys	Lys	Thr	Cys
		180						185				190			
Gly	Asn	Lys	Ser	Ser	Val	Asn	Ser	Thr	Val	Leu	Val	Lys	Asn	Thr	Lys
	195						200					205			
Lys	Thr	Asn	Pro	Glu	Met	Lys	Glu	Lys	Pro	Cys	His	Phe	Glu	Arg	Cys
	210					215					220				
Glu	Gly	Glu	Val	Asn	Thr	Arg	Phe	Ser	Leu	Lys	His				
225					230					235					

<210> 4029

<211> 909

<212> DNA

<213> Homo sapiens

<400> 4029

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 120  
 ctacatgctg ctgctggtgc tgccgtgcgt ggcgctcagc gaggtcagca tgcagggcga  
 180  
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 240  
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 300  
 ccattctcgt cggcaaaaac gtggtggcgcg tcgccaccaa ggctgcacc tnttcttgga  
 360  
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 420  
 ccacccccgc agcgcaactc ggtgccgccc ccgcgcgcgc cgctgcacgg cccgcctggg  
 480  
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 720  
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 780  
 gatccggccc ctgcctgctg ggccgcccgg gttggaaggg agggcagtgt ggcggagat  
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 900  
 aaagactcg  
 909

&lt;210&gt; 4030

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4030

Arg	Pro	Pro	Val	Leu	Gly	Gly	Ala	Gly	Pro	Ala	Gly	Pro	Ala	Gly	His
1				5				10						15	
Ala	Gly	Gln	Pro	Val	Gly	Ala	Ala	Ala	Leu	Arg	Ala	Ala	Ala	Val	Gly
			20					25					30		
Arg	Gly	Pro	His	Leu	Leu	Leu	Leu	Leu	His	Ala	Ala	Ala	Gly	Ala	Ala
		35					40					45			
Val	Arg	Gly	Ala	Gln	Arg	Gly	Gln	His	Ala	Gly	Arg	Ala	His	Ser	Ala
	50					55					60				
Ala	Glu	Asp	Asp	Ala	Val	Pro	Gly	Ala	Gln	Ser	Arg	His	Arg	Gln	Cys
65					70					75				80	
Gly	Gly	Pro	Cys	Trp	Arg	Ala	Pro	Pro	Thr	Trp	Arg	Cys	Ser	Gly	Thr
				85					90					95	
Ala	Val	Ser	Arg	Pro	Ser	Ser	Ser	Ala	Lys	Thr	Trp	Trp	Arg	Ser	Pro
			100					105					110		
Pro	Arg	Pro	Ala	Pro	Xaa	Pro	Gly	Val	Pro	Pro	Pro	Gly	Ala	Arg	Leu

	115		120		125
Pro	Xaa	Pro	Pro	Ala	Leu
	130		135		140
Arg	Asn	Ser	Val	Pro	Pro
145			150		155
Xaa	Pro	Pro	His	Val	Leu
			165		

&lt;210&gt; 4031

&lt;211&gt; 1406

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4031

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ctcaggaaag aaattgcagg cttcgaacaa cagaaagcaa aagaattagc tcgaatagaa
120
gagttaaaaa aggaggagat gaggaagcta caaaaggaac gtaaagtttt tgaaaagtat
180
actacagctg caagaacttt tccagataaa aaggaacgtg aagaaataca gactttaaaa
240
cagcaaatag cagatttacg ggaagatttg aaaagaaagg agaccaaatg gtcaagtaca
300
cacagccgtc tcagaagcca gatacaaatg ttagtcagag agaacacaga cctccgggaa
360
gaaataaaaag tgatggaaag attccgactg gatgcctgga agagagcaga agccatagag
420
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480
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540
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600
ggacaggctg cctctcccag ggagccactt gaaccactga acttcccaga tcctgaatat
660
aaagaggagg aggaagacca agacatacag ggagaaatca gtcacctga tggaaagggtg
720
gaaaagggtt ataagaatgg gtgccgtgtt atactgtttc ccaatggaac tcgaaaggaa
780
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840
atgccagacc aaagagtgat ctactactat gcagctgccc agaccactca cacgacatac
900
ccggagggac tggaagtctt acatttctca agtggacaaa tagaaaaaca ttaccagat
960
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1020
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1080
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1140
ccagatggca ctgttaaaac cgtatatgca aacgggtcatc aagaaacgaa gtacagatcc
1200

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 1260  
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 1320  
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 1380  
 gtttaccctg tggcaaaaaa aaaaaa  
 1406

<210> 4032  
 <211> 418  
 <212> PRT  
 <213> Homo sapiens

<400> 4032  
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 20 25 30  
 Ala Lys Glu Leu Ala Arg Ile Glu Phe Lys Lys Glu Met Arg  
 35 40 45  
 Lys Leu Gln Lys Glu Arg Lys Val Phe Glu Lys Tyr Thr Thr Ala Ala  
 50 55 60  
 Arg Thr Phe Pro Asp Lys Lys Glu Arg Glu Glu Ile Gln Thr Leu Lys  
 65 70 75 80  
 Gln Gln Ile Ala Asp Leu Arg Glu Asp Leu Lys Arg Lys Glu Thr Lys  
 85 90 95  
 Trp Ser Ser Thr His Ser Arg Leu Arg Ser Gln Ile Gln Met Leu Val  
 100 105 110  
 Arg Glu Asn Thr Asp Leu Arg Glu Glu Ile Lys Val Met Glu Arg Phe  
 115 120 125  
 Arg Leu Asp Ala Trp Lys Arg Ala Glu Ala Ile Glu Ser Ser Leu Glu  
 130 135 140  
 Val Glu Lys Lys Asp Lys Leu Ala Asn Thr Ser Val Arg Phe Gln Asn  
 145 150 155 160  
 Ser Gln Ile Ser Ser Gly Thr Gln Val Glu Lys Tyr Lys Lys Asn Tyr  
 165 170 175  
 Leu Pro Met Gln Gly Asn Pro Pro Arg Arg Ser Lys Ser Ala Pro Pro  
 180 185 190  
 Arg Asp Leu Gly Asn Leu Asp Lys Gly Gln Ala Ala Ser Pro Arg Glu  
 195 200 205  
 Pro Leu Glu Pro Leu Asn Phe Pro Asp Pro Glu Tyr Lys Glu Glu Glu  
 210 215 220  
 Glu Asp Gln Asp Ile Gln Gly Glu Ile Ser His Pro Asp Gly Lys Val  
 225 230 235 240  
 Glu Lys Val Tyr Lys Asn Gly Cys Arg Val Ile Leu Phe Pro Asn Gly  
 245 250 255  
 Thr Arg Lys Glu Val Ser Ala Asp Gly Lys Thr Ile Thr Val Thr Phe  
 260 265 270  
 Phe Asn Gly Asp Val Lys Gln Val Met Pro Asp Gln Arg Val Ile Tyr  
 275 280 285  
 Tyr Tyr Ala Ala Ala Gln Thr Thr His Thr Thr Tyr Pro Glu Gly Leu  
 290 295 300  
 Glu Val Leu His Phe Ser Ser Gly Gln Ile Glu Lys His Tyr Pro Asp



305                      310                      315                      320  
 Gly Arg Lys Glu Ile Thr Phe Pro Asp Gln Thr Val Lys Asn Leu Phe  
                                  325                      330                      335  
 Pro Asp Gly Gln Glu Glu Ser Ile Phe Pro Asp Gly Thr Ile Val Arg  
                                  340                      345                      350  
 Val Gln Arg Asp Gly Asn Lys Leu Ile Glu Phe Asn Asn Gly Gln Arg  
                                  355                      360                      365  
 Glu Leu His Thr Ala Gln Phe Lys Arg Arg Glu Tyr Pro Asp Gly Thr  
                                  370                      375                      380  
 Val Lys Thr Val Tyr Ala Asn Gly His Gln Glu Thr Lys Tyr Arg Ser  
 385                      390                      395                      400  
 Gly Arg Ile Arg Val Lys Asp Lys Glu Gly Asn Val Leu Met Asp Thr  
                                  405                      410                      415  
 Glu Leu

<210> 4033  
 <211> 487  
 <212> DNA  
 <213> Homo sapiens

<400> 4033  
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 120  
 tcaagaagag ccctcctagt ttggcctcta actggctgtg cgaccccagg caggtcactt  
 180  
 gtctctctg ggaagcagct gaataatgaa cactgggatt ttcccaggct ggcttctcac  
 240  
 tgcagagcag aggaaaagca ttctgggggc ctgctatgga gggtcattta tccagtttac  
 300  
 aacttccacg gccggccctc aatggcttcc tttctctccc acaagagcgc tgggccaagc  
 360  
 cagctctgca ccagttggac gccttccaag aaaaactcag gctccggggg ctgcttgta  
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 480  
 ccagtcc  
 487

<210> 4034  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 4034  
 Met Asn Thr Gly Ile Phe Pro Gly Trp Leu Leu Thr Ala Glu Gln Arg  
 1                      5                      10                      15  
 Lys Ser Ile Leu Gly Ala Cys Tyr Gly Gly Ser Phe Ile Gln Phe Thr  
                                  20                      25                      30  
 Thr Ser Thr Ala Gly Pro Gln Trp Leu Pro Phe Ser Pro Thr Arg Ala  
                                  35                      40                      45  
 Leu Gly Gln Ala Ser Ser Ala Pro Val Gly Arg Leu Pro Arg Lys Thr

50                      55                      60  
 Gln Ala Pro Gly Ala Ala Cys Gln Asp Gln Thr Gly Gly Leu Ala Pro  
 65                      70                      75                      80  
 Pro Pro Ala Met Cys Gly Glu Arg Ala Ser Pro Ser Gln Ser  
                     85                      90

<210> 4035  
 <211> 343  
 <212> DNA  
 <213> Homo sapiens

<400> 4035  
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 120  
 tcctatggga gggacaaact ctcagaaaat agcaagagta ttttggaatc ctatctgagg  
 180  
 tataaacact cagaacctca tagcagtgtt caggaatcct atgtgagga caaacattca  
 240  
 gaccacagca ggagcattct agaatcctat ttgaggaaca aacattcaga caatcgtagc  
 300  
 agtgttctgg aatccttttt ttttttgaag ctttcaatct ctt  
 343

<210> 4036  
 <211> 114  
 <212> PRT  
 <213> Homo sapiens

<400> 4036  
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 1                      5                      10                      15  
 Asp Asn Pro Ser Asn Val Leu Glu Ser Tyr Val Arg Asp Lys His Ser  
                     20                      25                      30  
 Asp Pro Ser Ser Asn Val Leu Glu Ser Tyr Gly Arg Asp Lys Leu Ser  
                     35                      40                      45  
 Glu Asn Ser Lys Ser Ile Leu Glu Ser Tyr Leu Arg Tyr Lys His Ser  
                     50                      55                      60  
 Glu Pro His Ser Ser Val Gln Glu Ser Tyr Val Arg Asp Lys His Ser  
 65                      70                      75                      80  
 Asp His Ser Arg Ser Ile Leu Glu Ser Tyr Leu Arg Asn Lys His Ser  
                     85                      90                      95  
 Asp Asn Arg Ser Ser Val Leu Glu Ser Phe Phe Phe Leu Lys Leu Ser  
                     100                      105                      110  
 Ile Ser

<210> 4037  
 <211> 741  
 <212> DNA  
 <213> Homo sapiens

<400> 4037

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 120  
 ggaggagaag gggttgggtct tgctgtctca gggcggcaga ggcagaagag aatctgagca  
 180  
 tacgtggacc ttagccagg tgggcataga taaaaggaaa tattgtttgc cagtccctgc  
 240  
 tggaatgatg cttttacaca tctgtctgat ctgattgctc cactgttttc tgacttctct  
 300  
 tccctttcca gggttctagc ctgttcatct agcccatga tggctgtgga catcgagtac  
 360  
 agatacaact gcatggctcc ttccttgccg caagagaggt ttgcctttaa gatctcacca  
 420  
 aagcccagca aaccactgag gccttgattt cagctgagca gcaagaatga agccagtggg  
 480  
 atgggtggccc cggctgtcca ggagaagaag gtgaaaaagc ggggtgcctt cgcagacaac  
 540  
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 600  
 ccattcaaca tcaccgagct cctagacaac attgtgagct tgacgacagc agagagcgag  
 660  
 agctttgttc tggatttttc ccagccctct gcagattact tagactttag aaatcgactt  
 720  
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 741

<210> 4038

<211> 134

<212> PRT

<213> Homo sapiens

<400> 4038

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Arg	Gln	Glu	Arg	Phe	Ala	Phe	Lys	Ile	Ser	Pro	Lys	Pro	Ser	Lys	Pro
			20					25					30		
Leu	Arg	Pro	Cys	Ile	Gln	Leu	Ser	Ser	Lys	Asn	Glu	Ala	Ser	Gly	Met
			35				40						45		
Val	Ala	Pro	Ala	Val	Gln	Glu	Lys	Lys	Val	Lys	Lys	Arg	Val	Ser	Phe
	50					55					60				
Ala	Asp	Asn	Gln	Gly	Leu	Ala	Leu	Thr	Met	Val	Lys	Val	Phe	Ser	Glu
65					70					75				80	
Phe	Asp	Asp	Pro	Leu	Asp	Met	Pro	Phe	Asn	Ile	Thr	Glu	Leu	Leu	Asp
			85					90					95		
Asn	Ile	Val	Ser	Leu	Thr	Thr	Ala	Glu	Ser	Glu	Ser	Phe	Val	Leu	Asp
			100					105					110		
Phe	Ser	Gln	Pro	Ser	Ala	Asp	Tyr	Leu	Asp	Phe	Arg	Asn	Arg	Leu	Gln
		115					120					125			
Ala	Asp	His	Val	Cys	Leu										
	130														

<210> 4039

<211> 1503

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4039

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120  
gagcgaggag ccctcgacg cgctagtctg cgagtgagcg ctacgcccgg cacctgttcc  
180  
tccagcgccg ccgccttccc acccctcgga ccgcgcgcgc tcgcggcgcc cgcccgttcc  
240  
tgcgatgaat ccggccctag gcaaccagac ggacgtggcg ggccttcctg gccaacagca  
300  
gcgaggcgct ggagcgagcc gtgcgctgct gcaccaggc gtccgtggtg accgacgacg  
360  
gcttcgcgga gggaggcccg gacgagcgta gcctgtacat aatgcgcgtg gtgcagatcg  
420  
cggtcagtgt cgtgctctca ctaccgtgg tcttcggcat cttcttcctc ggctgcaatc  
480  
tgctcatcaa gtccgagggc atgatcaact tcctcgtgaa ggaccggagg ccgtctaagg  
540  
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600  
cccacgcctg ccacttttg tagcccggt gtgcccctca ctatcagaga ctgggcgaag  
660  
caaacctgtc ggagtcaatt atttctctcg acttcggcct ttcggaaaga agcgaccggt  
720  
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780  
gaactcagca gaaagtggca agaagagggc gattagggcg cagaactttg gaagctgcta  
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<213> Homo sapiens

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Thr Ala Gln Gly Leu Ser Lys Ala Glu Arg Gly Ala Leu Ala Arg Ala  
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35 40 45  
Ala Phe Pro Pro Leu Gly Pro Ala Pro Leu Ala Ala Pro Ala Arg Ser  
50 55 60  
Cys Asp Glu Ser Gly Pro Arg Gln Pro Asp Gly Arg Gly Gly Pro Ser  
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<210> 4041  
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<212> DNA  
<213> Homo sapiens

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240  
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420  
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480  
ggagagctaa agaagggtga caccatctat aacacaagga caagaaagaa agtacgggtg  
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573

<210> 4042  
<211> 191  
<212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4042

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 20 25 30  
 Asp His Arg Gln Glu Leu Ile Glu Cys Val Ala Asn Ser Asp Glu Gln  
 35 40 45  
 Leu Gly Glu Met Phe Leu Glu Glu Lys Ile Pro Ser Ile Ser Asp Leu  
 50 55 60  
 Lys Leu Ala Ile Arg Arg Ala Thr Leu Lys Arg Ser Phe Thr Pro Val  
 65 70 75 80  
 Phe Leu Gly Ser Ala Leu Lys Asn Lys Gly Val Gln Pro Leu Leu Asp  
 85 90 95  
 Ala Val Leu Glu Tyr Leu Pro Asn Pro Ser Glu Val Gln Asn Tyr Ala  
 100 105 110  
 Ile Leu Asn Lys Glu Asp Asp Ser Lys Glu Lys Thr Lys Ile Leu Met  
 115 120 125  
 Asn Ser Ser Arg Asp Asn Ser His Pro Phe Val Gly Leu Ala Phe Lys  
 130 135 140  
 Leu Glu Val Gly Arg Phe Gly Gln Leu Thr Tyr Val Arg Ser Tyr Gln  
 145 150 155 160  
 Gly Glu Leu Lys Lys Gly Asp Thr Ile Tyr Asn Thr Arg Thr Arg Lys  
 165 170 175  
 Lys Val Arg Leu Gln Arg Leu Ala Arg Met His Ala Asp Met Met  
 180 185 190

&lt;210&gt; 4043

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4043

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 300  
 acaaaggata atttccatgg ttacaatggg attcctattg aggaaaagtc aaagaagagg  
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 420  
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 Arg Lys Glu Glu Glu Leu Arg Arg Lys Ala Leu Glu Glu Lys Arg Arg  
 35 40 45  
 Lys Glu Glu Leu Val Lys Lys Arg Ile Glu Leu Lys His Asp Lys Lys  
 50 55 60  
 Ala Arg Ala Met Ala Lys Arg Thr Lys Asp Asn Phe His Gly Tyr Asn  
 65 70 75 80  
 Gly Ile Pro Ile Glu Glu Lys Ser Lys Lys Arg Gln Ala Thr Glu Ser  
 85 90 95  
 His Thr Ser Gln Gly Thr Asp Arg Glu Tyr Glu Met Glu Glu Glu Asn  
 100 105 110  
 Glu Phe Leu Glu Tyr Asn His Ala Glu Ser Glu Gln Glu Tyr Glu Glu  
 115 120 125  
 Glu Gln Glu Pro Pro Lys Val Glu Ser Lys Pro Lys Val Ser Leu Lys  
 130 135 140  
 Gly Ala Pro Pro Pro Met Asn Phe Thr Asp Leu Leu Arg Leu Ala Glu  
 145 150 155 160  
 Lys Lys Gln Phe Glu Pro Val Glu Ile Lys Val Val Lys Lys Ser Glu  
 165 170 175  
 Glu Arg Pro Met Thr Ala Glu Glu Leu Arg Glu Arg Glu Phe Leu Glu  
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 Arg Lys His Arg Arg Lys Lys Leu Glu Thr Asp Gly Lys Leu Pro Pro  
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 Thr Val Ser Lys Lys Ala Pro Leu Gly Arg Lys  
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 <213> Homo sapiens

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gttaatgaca ccaagctggg actggtacag aaagtcagag aacacttaca gaacttgga  
240  
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600  
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gaattcnatg cgctaccttt tggaccacct acacttggan acttcagggc ggtttcaacg  
720  
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1800



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&lt;210&gt; 4046

&lt;211&gt; 437

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4046

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Phe	Val	Val	Asn	Asp	Thr	Lys	Leu	Gly	Leu	Val	Gln	Lys	Val	Arg	Glu
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His	Leu	Gln	Asn	Leu	Glu	Asn	Ser	Ala	Phe	Thr	Ala	Asp	Arg	His	Lys
	35					40					45				
Lys	Arg	Lys	Leu	Leu	Glu	Asn	Ser	Thr	Leu	Asn	Ser	Lys	Leu	Leu	Lys
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Val	Asn	Gly	Ser	Thr	Thr	Ala	Ile	Cys	Ala	Thr	Gly	Leu	Arg	Asn	Leu
65				70					75					80	
Gly	Asn	Thr	Cys	Phe	Met	Asn	Ala	Ile	Leu	Gln	Ser	Leu	Ser	Asn	Ile
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Glu	Gln	Phe	Cys	Cys	Tyr	Phe	Lys	Glu	Leu	Pro	Ala	Val	Glu	Leu	Arg
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Asn	Gly	Lys	Thr	Ala	Gly	Arg	Arg	Thr	Tyr	His	Thr	Arg	Ser	Gln	Gly
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Asp	Asn	Asn	Val	Ser	Leu	Val	Glu	Glu	Phe	Arg	Lys	Thr	Leu	Cys	Ala
	130					135					140				
Leu	Trp	Gln	Gly	Ser	Gln	Thr	Ala	Phe	Ser	Pro	Glu	Ser	Leu	Phe	Tyr
145				150					155					160	
Val	Val	Trp	Lys	Ile	Met	Pro	Asn	Phe	Arg	Gly	Tyr	Gln	Gln	Gln	Asp
			165					170						175	
Ala	His	Glu	Phe	Xaa	Ala	Leu	Pro	Phe	Gly	Pro	Pro	Thr	Leu	Gly	Xaa
		180						185					190		
Phe	Arg	Ala	Val	Ser	Thr	Val	Phe	Pro	Ala	Gln	Gln	Phe	Cys	Arg	Arg
	195					200						205			
Ile	Leu	Leu	Cys	Leu	Gln	Val	Xaa	Lys	Cys	Cys	Ile	Asn	Gly	Ala	Ser
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Thr	Val	Val	Thr	Ala	Ile	Phe	Gly	Gly	Ile	Leu	Gln	Asn	Glu	Val	Asn
225				230						235				240	
Cys	Leu	Ile	Cys	Gly	Thr	Glu	Ser	Arg	Lys	Phe	Asp	Pro	Phe	Leu	Asp
			245					250						255	
Leu	Ser	Leu	Asp	Ile	Pro	Ser	Gln	Phe	Arg	Ser	Lys	Arg	Ser	Lys	Asn

	260		265		270										
Gln	Glu	Asn	Gly	Pro	Val	Cys	Ser	Leu	Arg	Asp	Cys	Leu	Arg	Ser	Phe
	275						280					285			
Thr	Asp	Leu	Glu	Glu	Leu	Asp	Glu	Thr	Glu	Leu	Tyr	Met	Cys	His	Lys
	290					295						300			
Cys	Lys	Xaa	Lys	Gln	Lys	Ser	Thr	Lys	Lys	Phe	Trp	Ile	Gln	Lys	Leu
305					310					315					320
Pro	Lys	Val	Leu	Cys	Leu	His	Leu	Lys	Arg	Phe	His	Trp	Thr	Ala	Tyr
			325						330					335	
Leu	Arg	Asn	Lys	Val	Asp	Thr	Tyr	Val	Glu	Phe	Pro	Leu	Arg	Gly	Leu
			340						345					350	
Asp	Met	Lys	Cys	Tyr	Leu	Leu	Asp	Pro	Glu	Asn	Ser	Gly	Pro	Glu	Ser
		355					360					365			
Cys	Leu	Tyr	Asp	Leu	Ala	Ala	Val	Val	Val	His	His	Gly	Ser	Gly	Val
370						375						380			
Gly	Ser	Gly	His	Tyr	Thr	Ala	Tyr	Ala	Thr	His	Glu	Gly	Arg	Trp	Phe
385					390					395					400
His	Phe	Asn	Asp	Ser	Thr	Val	Thr	Leu	Thr	Asp	Glu	Glu	Thr	Val	Val
			405						410					415	
Lys	Ala	Lys	Ala	Asn	Ile	Leu	Phe	Tyr	Val	Glu	His	Gln	Ala	Lys	Ala
			420					425						430	
Gly	Ser	Asp	Lys	Leu											
			435												

&lt;210&gt; 4047

&lt;211&gt; 809

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4047

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660  
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720

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 809

<210> 4048  
 <211> 118  
 <212> PRT  
 <213> Homo sapiens

<400> 4048  
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 Val Ala Ile Gly Phe Thr Gly Gly Leu Val Phe Met Tyr Val Gln Cys  
 35 40 45  
 Lys Val Tyr Val Gln Leu Trp Arg Arg Leu Lys Ala Tyr Asn Arg Val  
 50 55 60  
 Ile Phe Val Gln Asn Cys Pro Asp Thr Ala Lys Lys Leu Glu Lys Asn  
 65 70 75 80  
 Phe Ser Cys Asn Val Asn Thr Asp Ile Lys Asp Ala Val Val Val Pro  
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 Val Pro Gln Thr Gly Ala Asn Ser Leu Pro Ser Ala Glu Gly Gly Pro  
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 Pro Glu Val Val Ser Val  
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<210> 4049  
 <211> 1211  
 <212> DNA  
 <213> Homo sapiens

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 1211

&lt;210&gt; 4050

&lt;211&gt; 403

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4050

Xaa	Leu	Ser	Asp	Pro	Ser	Gln	Asp	Leu	Gln	Phe	Ile	Val	Ala	Gly	Asp
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Glu	Cys	Val	Tyr	Leu	Tyr	Gln	Pro	Asp	Glu	Arg	Gly	Pro	Cys	Phe	Ala
		20						25					30		
Phe	Glu	Gly	His	Lys	Leu	Ile	Ala	His	Trp	Phe	Arg	Gly	Tyr	Leu	Ile
		35					40					45			
Ile	Val	Ser	Arg	Asp	Arg	Lys	Val	Ser	Pro	Lys	Ser	Glu	Phe	Thr	Ser
		50				55				60					
Arg	Asp	Ser	Gln	Ser	Ser	Asp	Lys	Gln	Ile	Leu	Asn	Ile	Tyr	Asp	Leu
65				70					75					80	
Cys	Asn	Lys	Phe	Ile	Ala	Tyr	Ser	Thr	Val	Phe	Glu	Asp	Val	Val	Asp
			85						90					95	
Val	Leu	Ala	Glu	Trp	Gly	Ser	Leu	Tyr	Val	Leu	Thr	Arg	Asp	Gly	Arg
		100						105					110		
Val	His	Ala	Leu	Gln	Glu	Lys	Asp	Thr	Gln	Thr	Lys	Leu	Glu	Met	Leu
		115					120						125		
Phe	Lys	Lys	Asn	Leu	Phe	Glu	Met	Ala	Ile	Asn	Leu	Ala	Lys	Ser	Gln
		130					135					140			
His	Leu	Asp	Ser	Asp	Gly	Leu	Ala	Gln	Ile	Phe	Met	Gln	Tyr	Gly	Asp
145				150						155				160	
His	Leu	Tyr	Ser	Lys	Gly	Asn	His	Asp	Gly	Ala	Val	Gln	Gln	Tyr	Ile
			165						170					175	
Arg	Thr	Ile	Gly	Lys	Leu	Glu	Pro	Ser	Tyr	Val	Ile	Arg	Lys	Phe	Leu
			180					185						190	
Asp	Ala	Gln	Arg	Ile	His	Asn	Leu	Thr	Ala	Tyr	Leu	Gln	Thr	Leu	His

195	200	205
Arg Gln Ser Leu Ala Asn Ala Asp His Thr Thr	Leu Leu Leu Asn Cys	
210	215	220
Tyr Thr Lys Leu Lys Asp Ser Ser Lys Leu Glu	Glu Phe Ile Lys Lys	
225	230	235
Lys Ser Glu Ser Glu Val His Phe Asp Val Glu Thr	Ala Ile Lys Val	
245	250	255
Leu Arg Gln Ala Gly Tyr Tyr Ser His Ala Leu Tyr	Leu Ala Glu Asn	
260	265	270
His Ala His His Glu Trp Tyr Leu Lys Ile Gln Leu	Glu Asp Ile Lys	
275	280	285
Asn Tyr Gln Glu Ala Leu Arg Tyr Ile Gly Lys Leu	Pro Phe Glu Gln	
290	295	300
Ala Glu Ser Asn Met Lys Arg Tyr Gly Lys Ile Leu	Met His His Ile	
305	310	315
Pro Glu Gln Thr Thr Gln Leu Leu Lys Gly Leu Cys	Thr Asp Tyr Arg	
325	330	335
Pro Ser Leu Glu Gly Arg Ser Asp Arg Glu Ala Pro	Gly Cys Arg Ala	
340	345	350
Asn Ser Glu Glu Phe Ile Pro Ile Phe Ala Asn Asn	Pro Arg Glu Leu	
355	360	365
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Cys	Ile	Arg	Ser	Lys	Asp	Thr	Asp	Ala	Leu	Ile	Asp	Ala	Ile	Asp	Thr
		195				200					205				
Gly	Ala	Phe	Glu	Val	Asn	Phe	Met	Asp	Asp	Val	Gly	Gln	Thr	Leu	Leu
	210				215						220				
Asn	Trp	Ala	Ser	Ala	Phe	Gly	Thr	Gln	Glu	Met	Val	Glu	Phe	Leu	Cys
225				230					235					240	
Glu	Arg	Gly	Ala	Asp	Val	Asn	Arg	Gly	Gln	Arg	Ser	Ser	Ser	Leu	His
			245					250						255	
Tyr	Ala	Ala	Cys	Phe	Gly	Arg	Pro	Gln	Val	Ala	Lys	Thr	Leu	Leu	Arg
		260					265						270		
His	Gly	Ala	Asn	Pro	Asp	Leu	Arg	Asp	Glu	Asp	Gly	Lys	Thr	Pro	Leu
	275					280						285			
Asp	Lys	Ala	Arg	Glu	Arg	Gly	His	Ser	Glu	Val	Val	Ala	Ile	Leu	Gln
	290				295						300				
Ser	Pro	Gly	Asp	Trp	Met	Cys	Pro	Val	Asn	Lys	Gly	Asp	Asp	Lys	Lys

305                      310                      315                      320  
 Lys Lys Asp Thr Asn Lys Asp Glu Glu Glu Cys Asn Glu Pro Lys Gly  
                                  325                      330                      335  
 Asp Pro Glu Met Ala Pro Ile Tyr Leu Lys Arg Leu Leu Pro Val Phe  
                                  340                      345                      350  
 Ala Gln Thr Phe Gln Gln Thr Met Leu Pro Ser Ile Arg Lys Ala Ser  
                                  355                      360                      365  
 Leu Ala Leu Ile Arg Lys Met Ile His Phe Cys Ser Glu Ala Leu Leu  
                                  370                      375                      380  
 Lys Glu Val Cys Asp Ser Asp Val Gly His Asn Leu Pro Thr Ile Leu  
 385                      390                      395                      400  
 Val Glu Ile Thr Ala Thr Val Leu Asp Gln Glu Asp Asp Asp Asp Gly  
                                  405                      410                      415  
 His Leu Leu Ala Leu Gln Ile Ile Arg Asp Leu Val Asp Lys Gly Gly  
                                  420                      425                      430  
 Asp Ile Phe Leu Asp Gln Leu Ala Arg Leu Gly Val Ile Ser Lys Val  
                                  435                      440                      445  
 Ser Thr Leu Ala Gly Pro Ser Ser Asp Asp Glu Asn Glu Glu Glu Ser  
                                  450                      455                      460  
 Lys Pro Glu Lys Glu Asp Glu Pro Gln Glu Asp Ala Lys Glu Leu Gln  
 465                      470                      475                      480  
 Gln Gly Lys Pro Tyr His Trp Arg Asp Trp Ser Ile Ile Arg Gly Arg  
                                  485                      490                      495  
 Asp Cys Leu Tyr Ile Trp Ser Asp Ala Ala Ala Leu Glu Leu Ser Asn  
                                  500                      505                      510  
 Gly Ser Asn Gly Trp Phe Arg Phe Ile Leu Asp Gly Lys Leu Ala Thr  
                                  515                      520                      525  
 Met Tyr Ser Ser Gly Ser Pro Glu Gly Gly Ser Asp Ser Ser Glu Ser  
                                  530                      535                      540  
 Arg Ser Glu Phe Leu Glu Lys Leu Gln Arg Ala Arg Gly Gln Val Lys  
 545                      550                      555                      560  
 Pro Ser Thr Ser Ser Gln Pro Ile Leu Ser Ala Pro Gly Pro Thr Lys  
                                  565                      570                      575  
 Leu Thr Val Gly Asn Trp Ser Leu Thr Cys Leu Lys Glu Gly Glu Ile  
                                  580                      585                      590  
 Ala Ile His Asn Ser Asp Gly Gln Gln Ala Thr Ile Leu Lys Glu Asp  
                                  595                      600                      605  
 Leu Pro Gly Phe Val Phe Glu Ser Asn Arg Gly Thr Lys His Ser Phe  
                                  610                      615                      620  
 Thr Ala Glu Thr Ser Leu Gly Ser Glu Phe Val Thr Gly Trp Thr Gly  
 625                      630                      635                      640  
 Lys Arg Gly Arg Lys Leu Lys Ser Lys Leu Glu Lys Thr Lys Xaa Lys  
                                  645                      650                      655  
 Val Arg Thr Met Ala Arg Asp Leu Tyr Asp Asp His Phe Lys Ala Val  
                                  660                      665                      670  
 Glu Ser Met Pro Arg Gly Val Val Val Thr Leu Arg Asn Ile Ala Thr  
                                  675                      680                      685  
 Gln Leu Glu Ser Ser Trp Glu Leu His Thr Asn Arg Gln Cys Ile Glu  
                                  690                      695                      700  
 Ser Glu Asn Thr Trp Arg Asp Leu Met Lys Thr Ala Leu Glu Asn Leu  
 705                      710                      715                      720  
 Ile Val Leu Leu Lys Asp Glu Asn Thr Ile Ser Pro Tyr Glu Met Cys  
                                  725                      730                      735  
 Ser Ser Gly Leu Val Gln Ala Leu Leu Thr Val Leu Asn Asn Ser Met

740										745					750						
Asp	Leu	Asp	Met	Lys	Gln	Asp	Cys	Ser	Gln	Leu	Val	Glu	Arg	Ile	Asn						
		755					760					765									
Val	Phe	Lys	Thr	Ala	Phe	Ser	Glu	Asn	Glu	Asp	Asp	Glu	Ser	Arg	Pro						
		770					775					780									
Ala	Val	Ala	Leu	Ile	Arg	Lys	Leu	Ile	Ala	Val	Leu	Glu	Ser	Ile	Glu						
785					790						795				800						
Arg	Leu	Pro	Leu	His	Leu	Tyr	Asp	Thr	Pro	Gly	Ser	Thr	Tyr	Asn	Leu						
				805					810					815							
Gln	Ile	Leu	Thr	Arg	Arg	Leu	Arg	Phe	Arg	Leu	Glu	Arg	Ala	Pro	Gly						
			820					825					830								
Glu	Thr	Ala	Leu	Ile	Asp	Arg	Thr	Gly	Arg	Met	Leu	Lys	Met	Glu	Pro						
		835					840					845									
Leu	Ala	Thr	Val	Glu	Ser	Leu	Glu	Gln	Tyr	Leu	Leu	Lys	Met	Val	Ala						
		850				855					860										
Lys	Gln	Trp	Tyr	Asp	Phe	Asp	Arg	Ser	Ser	Phe	Val	Phe	Val	Arg	Lys						
865					870					875					880						
Leu	Arg	Glu	Gly	Gln	Asn	Phe	Ile	Phe	Arg	His	Gln	His	Asp	Phe	Asp						
				885					890					895							
Glu	Asn	Gly	Ile	Ile	Tyr	Trp	Ile	Gly	Thr	Asn	Ala	Lys	Thr	Ala	Tyr						
			900					905					910								
Glu	Trp	Val	Asn	Pro	Ala	Ala	Tyr	Gly	Leu	Val	Val	Val	Thr	Ser	Ser						
		915					920					925									
Glu	Gly	Arg	Asn	Leu	Pro	Tyr	Gly	Arg	Leu	Glu	Asp	Ile	Leu	Ser	Arg						
		930				935					940										
Asp	Asn	Ser	Ala	Leu	Asn	Cys	His	Ser	Asn	Asp	Asp	Lys	Asn	Ala	Trp						
945					950					955					960						
Phe	Ala	Ile	Asp	Leu	Gly	Leu	Trp	Val	Ile	Pro	Ser	Ala	Tyr	Thr	Leu						
				965					970					975							
Arg	His	Ala	Arg	Gly	Tyr	Gly	Arg	Ser	Ala	Leu	Arg	Asn	Trp	Val	Phe						
			980					985					990								
Gln	Val	Ser	Lys	Asp	Gly	Gln	Asn	Trp	Thr	Ser	Leu	Tyr	Thr	His	Val						
			995				1000					1005									
Asp	Asp	Cys	Ser	Leu	Asn	Glu	Pro	Gly	Ser	Thr	Ala	Thr	Trp	Pro	Leu						</

1170	1175	1180
Ser Ser Leu Val Lys Asn Asn Cys Pro Asp Lys Thr Ser Ala Ala Ala		
1185	1190	1195
Gly Ser Ser Ser Arg Lys Gly Ser Ser Ser Val Cys Ser Val Ala		1200
1205	1210	1215
Ser Ser Ser Asp Ile Ser Leu Gly Ser Thr Lys Thr Glu Arg Arg Ser		
1220	1225	1230
Glu Ile Val Met Glu His Ser Ile Val Ser Gly Ala Asp Val His Glu		
1235	1240	1245
Pro Ile Val Val Leu Ser Ser Ala Glu Asn Val Pro Gln Thr Glu Val		
1250	1255	1260
Gly Ser Ser Ser Ser Ala Ser Thr Ser Thr Leu Thr Ala Glu Thr Gly		
1265	1270	1275
Ser Glu Asn Ala Glu Arg Lys Leu Gly Pro Asp Ser Ser Val Arg Thr		1280
1285	1290	1295
Pro Gly Glu Ser Ser Ala Ile Ser Met Gly Ile Val Ser Val Ser Ser		
1300	1305	1310
Pro Asp Val Ser Ser Val Ser Glu Leu Thr Asn Lys Glu Ala Ala Ser		
1315	1320	1325
Gln Arg Pro Leu Ser Ser Ser Ala Ser Asn Arg Leu Ser Val Ser Ser		
1330	1335	1340
Leu Leu Ala Ala Gly Ala Pro Met Ser Ser Ser Ala Ser Val Pro Asn		
1345	1350	1355
Leu Ser Ser Arg Glu Thr Ser Ser Leu Glu Ser Phe Val Arg Arg Val		1360
1365	1370	1375
Ala Asn Ile Ala Arg Thr Asn Ala Thr Asn Asn Met Asn Leu Ser Arg		
1380	1385	1390
Ser Ser Ser Asp Asn Asn Thr Asn Thr Leu Gly Arg Asn Val Met Ser		
1395	1400	1405
Thr Ala Thr Ser Pro Leu Met Gly Ala Gln Ser Phe Pro Asn Leu Thr		
1410	1415	1420
Thr Pro Gly Thr Thr Ser Thr Val Thr Met Ser Thr Ser Ser Val Thr		
1425	1430	1435
Ser Ser Ser Asn Val Ala Thr Ala Thr Thr Val Leu Ser Val Gly Gln		1440
1445	1450	1455
Ser Leu Ser Asn Thr Leu Thr Thr Ser Leu Thr Ser Thr Ser Ser Glu		
1460	1465	1470
Ser Asp Thr Gly Gln Glu Ala Glu Tyr Ser Leu Tyr Asp Phe Leu Asp		
1475	1480	1485
Ser Cys Arg Ala Ser Thr Leu Leu Ala Glu Leu Asp Asp Asp Glu Asp		
1490	1495	1500
Leu Pro Glu Pro Asp Glu Glu Asp Asp Glu Asn Glu Asp Asp Asn Gln		
1505	1510	1515
Glu Asp Gln Glu Tyr Glu Glu Val Met Ile Leu Arg Arg Pro Ser Leu		
1525	1530	1535
Gln Arg Arg Ala Gly Ser Arg Ser Asp Val Thr His His Ala Val Thr		
1540	1545	1550
Ser Gln Leu Pro Gln Val Pro Ala Gly Ala Gly Ser Arg Pro Ile Gly		
1555	1560	1565
Glu Gln Glu Glu Glu Tyr Glu Thr Lys Gly Gly Arg Arg Arg Thr		
1570	1575	1580
Trp Asp Asp Asp Tyr Val Leu Lys Arg Gln Phe Ser Ala Leu Val Pro		
1585	1590	1595
Ala Phe Asp Pro Arg Pro Gly Arg Thr Asn Val Gln Gln Thr Thr Asp		1600



1605 1610 1615  
 Leu Glu Ile Pro Pro Pro Gly Thr Pro His Ser Glu Leu Leu Glu Glu  
 1620 1625 1630  
 Val Glu Cys Thr Pro Ser Pro Arg Leu Ala Leu Thr Leu Lys Val Thr  
 1635 1640 1645  
 Gly Leu Gly Thr Thr Arg Glu Val Glu Leu Pro Leu Thr Asn Phe Arg  
 1650 1655 1660  
 Ser Thr Ile Phe Tyr Tyr Val Gln Lys Leu Leu Gln Leu Ser Cys Asn  
 1665 1670 1675 1680  
 Gly Asn Val Lys Ser Asp Lys Leu Arg Arg Ile Trp Glu Pro Thr Tyr  
 1685 1690 1695  
 Thr Ile Met Tyr Arg Glu Met Lys Asp Ser Asp Lys Glu Lys Glu Asn  
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 Gly Lys Met Gly Cys Trp Ser Ile Glu His Val Glu Gln Tyr Leu Gly  
 1715 1720 1725  
 Thr Asp Glu Leu Pro Lys Asn Asp Leu Ile Thr Tyr Leu Gln Lys Asn  
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 Ala Asp Ala Ala Phe Leu Arg His Trp Lys Leu Thr Gly Thr Asn Lys  
 1745 1750 1755 1760  
 Ser Ile Arg Lys Asn Arg Asn Cys Ser Gln Leu Ile Ala Ala Tyr Lys  
 1765 1770 1775  
 Asp Phe Cys Glu His Gly Thr Lys Ser Gly Leu Asn Gln Gly Ala Ile  
 1780 1785 1790  
 Ser Thr Leu Gln Ser Ser Asp Ile Leu Asn Leu Thr Lys Glu Gln Pro  
 1795 1800 1805  
 Gln Ala Lys Ala Gly Asn Gly Gln Asn Ser Cys Gly Val Glu Asp Val  
 1810 1815 1820  
 Leu Gln Leu Leu Arg Ile Leu Tyr Ile Val Ala Ser Asp Pro Tyr Ser  
 1825 1830 1835 1840  
 Arg Ile Ser Gln Glu Asp Gly Asp Glu Gln Pro Gln Phe Thr Phe Pro  
 1845 1850 1855  
 Pro Asp Glu Phe Thr Ser Lys Lys Ile Thr Thr Lys Ile Leu Gln Gln  
 1860 1865 1870  
 Ile Glu Glu Pro Leu Ala Leu Ala Ser Gly Ala Leu Pro Asp Trp Cys  
 1875 1880 1885  
 Glu Gln Leu Thr Ser Lys Cys Pro Phe Leu Ile Pro Phe Glu Thr Arg  
 1890 1895 1900  
 Gln Leu Tyr Phe Thr Cys Thr Ser Phe Gly Ala Ser Arg Ala Ile Val  
 1905 1910 1915 1920  
 Trp Leu Gln Asn Arg Arg Glu Ala Thr Val Glu Arg Thr Arg Thr Thr  
 1925 1930 1935  
 Ser Ser Val Arg Arg Asp Asp Pro Gly Glu Phe Arg Val Gly Arg Leu  
 1940 1945 1950  
 Lys His Glu Arg Val Lys Val Pro Arg Gly Glu Ser Leu Met Glu Trp  
 1955 1960 1965  
 Ala Glu Asn Val Met Gln Ile His Ala Asp Arg Lys Ser Val Leu Glu  
 1970 1975 1980  
 Val Glu Phe Leu Gly Glu Glu Gly Thr Gly Leu Gly Pro Thr Leu Glu  
 1985 1990 1995 2000  
 Phe Tyr Ala Leu Val Ala Ala Glu Phe Gln Arg Thr Asp Leu Gly Ala  
 2005 2010 2015  
 Trp Leu Cys Asp Asp Asn Phe Pro Asp Asp Glu Ser Arg His Val Asp  
 2020 2025 2030  
 Leu Gly Gly Gly Leu Lys Pro Pro Gly Tyr Tyr Val Gln Arg Ser Cys

2035	2040	2045
Gly Leu Phe Thr Ala Pro Phe Pro Gln Asp Ser Asp Glu Leu Glu Arg		
2050	2055	2060
Ile Thr Lys Leu Phe His Phe Leu Gly Ile Phe Leu Ala Lys Cys Ile		
2065	2070	2075
Gln Asp Asn Arg Leu Val Asp Leu Pro Ile Ser Lys Pro Phe Phe Lys		2080
2085	2090	2095
Leu Met Cys Met Gly Asp Ile Lys Ser Asn Met Ser Lys Leu Ile Tyr		
2100	2105	2110
Glu Ser Arg Gly Asp Arg Asp Leu His Cys Thr Glu Ser Gln Ser Glu		
2115	2120	2125
Ala Ser Thr Glu Glu Gly His Asp Ser Leu Ser Val Gly Ser Phe Glu		
2130	2135	2140
Glu Asp Ser Lys Ser Glu Phe Ile Leu Asp Pro Pro Lys Pro Lys Pro		
2145	2150	2155
Pro Ala Trp Leu Asn Gly Ile Leu Thr Trp Glu Asp Phe Glu Leu Val		
2165	2170	2175
Asn Pro His Arg Ala Arg Phe Leu Lys Glu Ile Lys Asp Leu Ala Ile		
2180	2185	2190
Lys Arg Arg Gln Ile Leu Ser Asn Lys Gly Leu Ser Glu Asp Glu Lys		
2195	2200	2205
Asn Thr Lys Leu Gln Glu Leu Val Leu Lys Asn Pro Ser Gly Ser Gly		
2210	2215	2220
Pro Pro Leu Ser Ile Glu Asp Leu Gly Leu Asn Phe Gln Phe Cys Pro		
2225	2230	2235
Ser Ser Arg Ile Tyr Gly Phe Thr Ala Val Asp Leu Lys Pro Ser Gly		
2245	2250	2255
Glu Asp Glu Met Ile Thr Met Asp Asn Ala Glu Glu Tyr Val Asp Leu		
2260	2265	2270
Met Phe Asp Phe Cys Met His Thr Gly Ile Gln Lys Gln Met Glu Ala		
2275	2280	2285
Phe Arg Asp Gly Phe Asn Lys Val Phe Pro Met Glu Lys Leu Ser Ser		
2290	2295	2300
Phe Ser His Glu Glu Val Gln Met Ile Leu Cys Gly Asn Gln Ser Pro		
2305	2310	2315
Ser Trp Ala Ala Glu Asp Ile Ile Asn Tyr Thr Glu Pro Lys Leu Gly		
2325	2330	2335
Tyr Thr Arg Asp Ser Pro Gly Phe Leu Arg Phe Val Arg Val Leu Cys		
2340	2345	2350
Gly Met Ser Ser Asp Glu Arg Lys Ala Phe Leu Gln Phe Thr Thr Gly		
2355	2360	2365
Cys Ser Thr Leu Pro Pro Gly Gly Leu Ala Asn Leu His Pro Arg Leu		
2370	2375	2380
Thr Val Val Arg Lys Val Asp Ala Thr Asp Ala Ser Tyr Pro Ser Val		
2385	2390	2395
Asn Thr Cys Val His Tyr Leu Lys Leu Pro Glu Tyr Ser Ser Glu Glu		
2405	2410	2415
Ile Met Arg Glu Arg Leu Leu Ala Ala Thr Met Glu Lys Gly Phe His		
2420	2425	2430
Leu Asn		

&lt;210&gt; 4057

&lt;211&gt; 533

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4057

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 cagttccatt ctcatgttctt cctcccagag ctgcagcggc gcctggacga ctggacagct  
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 aacccccgca tcggtgacgt gatccagaag ctggccccct tcctgaagat gtacagttag  
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 533

&lt;210&gt; 4058

&lt;211&gt; 157

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4058

Ala	Arg	Leu	His	Leu	Leu	Asp	Gln	Val	Phe	Phe	Gln	Glu	Leu	Leu	Lys
1				5					10					15	
Thr	Ala	Arg	Ser	Ser	Lys	Ala	Phe	Pro	Glu	Asp	Val	Val	Arg	Val	Ile
			20					25					30		
Phe	Ser	Asn	Ile	Ser	Ser	Ile	Tyr	Gln	Phe	His	Ser	Gln	Phe	Phe	Leu
		35					40					45			
Pro	Glu	Leu	Gln	Arg	Arg	Leu	Asp	Asp	Trp	Thr	Ala	Asn	Pro	Arg	Ile
	50					55				60					
Gly	Asp	Val	Ile	Gln	Lys	Leu	Ala	Pro	Phe	Leu	Lys	Met	Tyr	Ser	Glu
65				70					75					80	
Tyr	Val	Lys	Asn	Phe	Glu	Arg	Ala	Ala	Glu	Leu	Leu	Ala	Thr	Trp	Thr
			85						90				95		
Asp	Lys	Ser	Pro	Leu	Phe	Gln	Glu	Val	Leu	Thr	Arg	Ile	Gln	Val	Arg
			100					105					110		
Leu	Gly	Glu	Gly	Trp	Ser	Gln	His	Cys	His	Ser	Gln	His	Ala	Val	Ala
	115					120						125			
Gln	Val	Ala	Leu	Ser	Asp	Ser	Gly	His	Leu	Pro	Gly	Ser	Ala	Ala	Ser
	130					135					140				
Ile	Gly	Pro	Cys	Leu	Leu	Val	Arg	Pro	Ser	Gly	Ala	Ala			
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&lt;210&gt; 4059

&lt;211&gt; 3994

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4059

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1080  
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3180

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<212> PRT

<213> Homo sapiens

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Gly	Ser	Trp	Ser	Trp	Ala	Gln	Ala	Leu	Pro	Pro	Glu	Glu	Val	Cys	His
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Gln	Glu	Pro	Ala	Leu	Arg	Gly	Glu	Met	Ala	Glu	Gly	Met	Pro	Pro	Met
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Ala	Ala	Ile	Gln	Ala	Met	Glu	Arg	Lys	Ile	Glu	Ser	Gln	Ala	Ala	His

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Asp	Cys	Glu	Lys	Thr	Ala	Val	Glu	Phe	Gly	Asn	Gln	Leu	Glu	Gly
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Trp	Ala	Val	Leu	Gly	Thr	Leu	Leu	Gln	Glu	Tyr	Gly	Leu	Leu	Gln
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Glu	Asp	Thr	Leu	Cys	Val	Arg	Gly	Gln	Arg	Gly	Leu	Glu	Glu	Arg
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Pro	Tyr	Pro	Trp	Gly	Pro	Arg	Asp	Ser	Met	Asp	Gly	Glu	Leu	Gly
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Gly	Gly	Leu	Arg	Arg	Ser	Leu	Leu	Leu	His	Gly	Ala	Arg	Ser	Lys
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Tyr	Ser	Cys	Pro	Glu	Cys	Gly	Lys	Ser	Phe	Gly	Val	Arg	Lys	Ser
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[illegible]

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<212> DNA
<213> Homo sapiens
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Asp Lys Ala Pro Leu Arg	Gln Leu Leu Asp Ala	Thr Ile Gly Ala Tyr
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Ile Asn Thr Thr His Ser	Arg Leu Thr His Ile	Ser Pro Arg His Tyr
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Ser Glu Phe Ile Glu Phe	Leu Ser Lys Ala Arg	Glu Thr Phe Leu Met
115	120	125
Ala His Asp Gly His Ile	Gln Phe Thr Gln Phe	Ile Asp Asn Leu Lys
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165		

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4063

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4137

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 Gly Tyr Arg Thr Ala Phe Phe Gly Lys Tyr Leu Asn Glu Tyr Asn Gly  
 85 90 95  
 Ser Tyr Val Pro Gly Trp Lys Glu Trp Val Gly Leu Leu Lys Asn  
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 Ser Arg Phe Tyr Asn Tyr Thr Leu Cys Arg Asn Gly Val Lys Glu Lys  
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 His Gly Ser Asp Tyr Ser Lys Asp Tyr Leu Thr Asp Leu Ile Thr Asn  
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 Asp Ser Val Ser Phe Phe Arg Thr Ser Lys Lys Met Tyr Pro His Arg  
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 Pro Val Leu Met Val Ile Ser His Ala Ala Pro His Gly Pro Glu Asp  
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 Ser Ala Pro Gln Tyr Ser Arg Leu Phe Pro Asn Ala Ser Gln His Ile  
 180 185 190  
 Thr Pro Ser Tyr Asn Tyr Ala Pro Asp Pro Asp Lys His Trp Ile Met  
 195 200 205  
 Arg Tyr Thr Gly Pro Met Lys Pro Ile His Met Glu Phe Thr Asn Met  
 210 215 220  
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 Glu Thr Ile Tyr Asn Met Leu Val Glu Thr Gly Glu Leu Asp Asn Thr  
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 Tyr Ile Val Tyr Thr Ala Asp His Gly Tyr His Ile Gly Gln Phe Gly  
 260 265 270  
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 Arg Asp Asn Asp Lys Val Asp Ala Gln Glu Glu Asn Phe Leu Pro Lys

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Lys Leu Lys Leu His Lys Cys Lys Gly Pro Met Arg Leu Gly Gly Ser		415
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Arg Lys Lys Xaa Leu Gln Glu Glu Xaa Tyr Lys Ala Ser Tyr Val Arg		460
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His Val Gly Leu Gly Asp Ala Ala Gln Pro Arg Asn Leu Thr Lys Arg		495
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His Trp Pro Gly Ala Pro Glu Asp Gln Asp Asp Lys Asp Gly Gly Asp		510
	515	520
Xaa Ser Val Ala Leu Glu Ala Phe Pro Thr Thr Gln Pro Pro Thr Xaa		525
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Cys Asp Leu Asp Leu Tyr Lys Ser Leu Gln Ala Trp Lys Asp His Lys		560
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Leu Arg Glu Val Arg Gly His Leu Lys Lys Lys Arg Pro Glu Glu Cys		590
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His Arg Gly Ser Ser Leu His Pro Phe Arg Lys Gly Leu Gln Glu Lys		620
625	630	635
Asp Lys Val Trp Leu Leu Arg Glu Gln Lys Arg Lys Lys Lys Leu Arg		640
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	675	680
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	690	695
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Glu Phe Ala Thr Gly Phe Leu Glu Tyr Phe Asp Leu Asn Thr Asp Pro		720
	725	730
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Gln Leu His Val Gln Leu Met Glu Leu Arg Ser Cys Lys Gly Tyr Lys		750
	755	760
Gln Cys Asn Pro Arg Thr Arg Asn Met Asp Leu Gly Leu Lys Asp Gly		765
	770	775
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785	790	795
Met Lys Arg Pro Ser Ser Lys Ser Leu Gly Gln Leu Trp Glu Gly Trp		800

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 35             40             45
Pro Phe Ser Tyr Thr Tyr Arg Arg Pro Leu Arg Thr His Tyr Gly Tyr
 50             55             60
Ile Asn Val Lys Thr Gln Glu Pro Leu Gln Leu Asp Cys Asp Leu Cys
65             70             75             80
Ala Ile Val Ser Asn Ser Gly Gln Met Val Gly Gln Lys Val Gly Asn
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[illegible]

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960

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&lt;210&gt; 4068

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4068

Met	Asn	Ser	Ser	Thr	Pro	Ser	Thr	Ala	Asn	Gly	Asn	Asp	Ser	Lys	Lys
1				5					10					15	
Phe	Lys	Arg	Asp	Arg	Pro	Pro	Cys	Ser	Pro	Ser	Arg	Val	Leu	His	Leu
			20					25					30		
Arg	Lys	Ile	Pro	Cys	Asp	Val	Thr	Glu	Ala	Glu	Ile	Ile	Ser	Leu	Gly
		35					40					45			
Leu	Pro	Phe	Gly	Lys	Val	Thr	Asn	Leu	Leu	Met	Leu	Lys	Gly	Lys	Ser
	50					55				60					
Gln	Ala	Phe	Leu	Glu	Met	Ala	Ser	Glu	Glu	Ala	Ala	Val	Thr	Met	Val
65					70					75				80	
Asn	Tyr	Tyr	Thr	Pro	Ile	Thr	Pro	His	Leu	Arg	Ser	Gln	Pro	Val	Tyr
			85					90					95		
Ile	Gln	Tyr	Ser	Asn	His	Arg	Glu	Leu	Lys	Thr	Asp	Asn	Leu	Pro	Asn
		100					105					110			
Gln	Ala	Arg	Ala	Gln	Ala	Ala	Leu	Gln	Ala	Val	Ser	Ala	Val	Gln	Ser
		115					120					125			
Gly	Ser	Leu	Ala	Leu	Ser	Gly	Gly	Pro	Ser	Asn	Glu	Gly	Thr	Val	Leu
	130					135					140				
Pro	Gly	Gln	Ser	Pro	Val	Leu	Arg	Ile	Ile	Ile	Glu	Asn	Leu	Phe	Tyr



145                                      150                                      155                                      160  
 Pro Val Thr Leu Glu Val Leu His Gln Ile Phe Ser Lys Phe Gly Thr  
    165                                      170                                      175  
 Val Leu Lys Ile Ile Thr Phe Thr Lys Asn Asn Gln Phe Gln Ala Leu  
    180                                      185                                      190  
 Leu Gln Tyr Ala Asp Pro Val Asn Ala His Tyr Ala Lys Met Ala Leu  
    195                                      200                                      205  
 Asp Gly Gln Asn Ile Tyr Asn Ala Cys Cys Thr Leu Arg Ile Asp Phe  
    210                                      215                                      220  
 Ser Lys Leu Thr Ser Leu Asn Val Lys Tyr Asn Asn Asp Lys Ser Arg  
 225                                      230                                      235                                      240  
 Asp Phe Thr Arg Leu Asp Leu Pro Thr Gly Asp Gly Gln Pro Ser Leu  
    245                                      250                                      255  
 Glu Pro Pro Met Ala Ala Ala Phe Gly Ala Pro Gly Ile Ile Ser Ser  
    260                                      265                                      270  
 Pro Tyr Ala Gly Ala Ala Gly Phe Ala Pro Ala Ile Gly Phe Pro Gln  
    275                                      280                                      285  
 Ala Thr Gly Leu Ser Val Pro Ala Val Pro Gly Ala Leu Gly Pro Leu  
    290                                      295                                      300  
 Thr Ile Thr Ser Ser Ala Val Thr Gly Arg Met Ala Ile Pro Gly Ala  
 305                                      310                                      315                                      320  
 Ser Gly Ile Pro Gly Asn Ser Val Leu Leu Val Thr Asn Leu Asn Pro  
    325                                      330                                      335  
 Asp Leu Ile Thr Pro His Gly Leu Phe Ile Leu Phe Gly Val Tyr Gly  
    340                                      345                                      350  
 Asp Val His Arg Val Lys Ile Met Phe Asn Lys Lys Glu Asn Ala Leu  
    355                                      360                                      365  
 Val Gln Met Ala Asp Ala Asn Gln Ala Gln Leu Ala Met Asn His Leu  
    370                                      375                                      380  
 Ser Gly Gln Arg Leu Tyr Gly Lys Val Leu Arg Ala Thr Leu Ser Lys  
 385                                      390                                      395                                      400  
 His Gln Ala Val Gln Leu Pro Arg Glu Gly Gln Glu Asp Gln Gly Leu  
    405                                      410                                      415  
 Thr Lys Asp Phe Ser Asn Ser Pro Leu His Arg Phe Lys Lys Pro Gly  
    420                                      425                                      430  
 Ser Lys Asn Phe Gln Asn Ile Phe Pro Pro Ser Ala Thr Leu His Leu  
    435                                      440                                      445  
 Ser Asn Ile Pro Pro Ser Val Thr Val Asp Asp Leu Lys Asn Leu Phe  
    450                                      455                                      460  
 Ile Glu Ala Gly Cys Ser Val Lys Ala Phe Lys Phe Phe Gln Lys Asp  
 465                                      470                                      475                                      480  
 Arg Lys Met Ala Leu Ile Gln Leu Gly Ser Val Glu Glu Ala Ile Gln  
    485                                      490                                      495  
 Ala Leu Ile Glu Leu His Asn His Asp Leu Gly Glu Asn His His Leu  
    500                                      505                                      510  
 Arg Val Ser Phe Ser Lys Ser Thr Ile  
    515                                      520

&lt;210&gt; 4069

&lt;211&gt; 714

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4069

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 180  
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 420  
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 480  
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 540  
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 600  
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 660  
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 714

&lt;210&gt; 4070

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4070

Met	Ser	Tyr	Pro	Ala	Lys	Val	Thr	Leu	Leu	Gly	Ser	Val	Ile	Phe	Thr
1				5				10						15	
Phe	Gln	His	Thr	Gln	His	Leu	Ala	Ile	Ser	Lys	His	Asn	Leu	Met	Phe
		20						25					30		
Leu	Tyr	Thr	Ile	Phe	Ile	Val	Ala	Thr	Lys	Ile	Thr	Met	Met	Thr	Thr
		35					40					45			
Gln	Thr	Ser	Thr	Met	Thr	Phe	Ala	Pro	Phe	Glu	Asp	Thr	Leu	Ser	Trp
	50					55				60					
Met	Leu	Phe	Gly	Trp	Gln	Gln	Pro	Phe	Ser	Ser	Cys	Glu	Lys	Lys	Ser
65					70				75					80	
Glu	Ala	Lys	Ser	Pro	Ser	Asn	Gly	Val	Gly	Ser	Leu	Ala	Ser	Lys	Pro
			85				90						95		
Val	Asp	Val	Ala	Ser	Asp	Asn	Val	Lys	Lys	Lys	His	Thr	Lys	Lys	Asn
		100					105						110		

Glu

&lt;210&gt; 4071

&lt;211&gt; 601

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4071

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 601

<210> 4072

<211> 175

<212> PRT

<213> Homo sapiens

<400> 4072

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Cys	Ala	Leu	Val	Pro	Arg	Leu	Val	Arg	Met	Lys	Val	Phe	His	Leu	Ser
			20					25					30		
Leu	Ser	Gln	Ser	Val	Val	Leu	Arg	His	His	Trp	Ile	Leu	Pro	Phe	Val
		35					40					45			
Gln	Ala	Leu	Lys	Ala	Arg	Met	Thr	Ser	Phe	His	Arg	Phe	Phe	Phe	Thr
	50					55					60				
Ala	Asn	Gln	Val	Lys	Ile	Tyr	Thr	Asn	Gln	Glu	Lys	Thr	Arg	Thr	Phe
65					70					75				80	
Ile	Gly	Leu	Glu	Val	Thr	Ser	Gly	His	Ala	Gln	Phe	Leu	Asp	Leu	Val
			85						90				95		
Ser	Glu	Val	Asp	Arg	Val	Met	Glu	Glu	Phe	Asn	Leu	Thr	Thr	Phe	Tyr
		100						105					110		
Gln	Asp	Pro	Ser	Phe	His	Leu	Ser	Leu	Ala	Trp	Cys	Val	Gly	Asp	Ala
		115					120					125			
Arg	Leu	Gln	Leu	Glu	Gly	Gln	Cys	Leu	Gln	Glu	Leu	Gln	Ala	Ile	Val
	130					135					140				
Asp	Gly	Phe	Glu	Asp	Ala	Glu	Val	Leu	Leu	Arg	Val	His	Thr	Glu	Gln
145					150					155				160	
Val	Arg	Cys	Lys	Ser	Gly	Asn	Lys	Phe	Phe	Ser	Met	Pro	Leu	Lys	
				165					170					175	

<210> 4073

<211> 1864

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4073

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240  
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 1860  
 attg  
 1864

<210> 4074

<211> 456

<212> PRT

<213> Homo sapiens

<400> 4074

Met	Val	Glu	Ser	Ile	Lys	His	Cys	Ile	Val	Leu	Leu	Gln	Ile	Ala	Lys
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Asp	Gln	Ser	Asn	Ala	Glu	Lys	His	Ala	Asp	Gly	Met	Ile	Ser	Thr	Ile
			20					25				30			
Asn	Pro	Val	Asp	Ala	Ile	Tyr	Gln	Pro	Ser	Pro	Leu	Glu	Pro	Val	Ile
		35					40				45				
Ser	Thr	Met	Pro	Ser	Gln	Thr	Val	Leu	Pro	Pro	Glu	Pro	Val	Gln	Leu
	50					55					60				
Cys	Lys	Ser	Glu	Gln	Arg	Pro	Ser	Ser	Leu	Pro	Val	Gly	Pro	Val	Leu
65					70				75					80	
Ala	Thr	Leu	Gly	His	His	Gln	Thr	Pro	Thr	Pro	Asn	Ser	Thr	Gly	Ser
			85					90						95	
Gly	His	Ser	Pro	Ser	Ser	Ser	Leu	Thr	Ser	Pro	Ser	His	Val	Asn	
			100				105						110		
Leu	Ser	Pro	Asn	Thr	Val	Pro	Glu	Phe	Ser	Tyr	Ser	Ser	Ser	Glu	Asp
		115					120						125		
Glu	Phe	Tyr	Asp	Ala	Asp	Glu	Phe	His	Gln	Ser	Gly	Ser	Ser	Pro	Lys
	130					135					140				
Arg	Leu	Ile	Asp	Ser	Ser	Gly	Ser	Ala	Ser	Val	Leu	Thr	His	Ser	Ser
145					150					155				160	
Ser	Gly	Asn	Ser	Leu	Lys	Arg	Pro	Asp	Thr	Thr	Glu	Ser	Leu	Asn	Ser
			165					170						175	
Ser	Leu	Ser	Asn	Gly	Thr	Ser	Asp	Ala	Asp	Leu	Phe	Asp	Ser	His	Asp
		180					185						190		
Asp	Arg	Asp	Asp	Asp	Ala	Glu	Ala	Gly	Ser	Val	Glu	Glu	His	Lys	Ser
	195					200					205				
Val	Ile	Met	His	Leu	Leu	Ser	Gln	Val	Arg	Leu	Gly	Met	Asp	Leu	Thr
	210					215					220				
Lys	Val	Val	Leu	Pro	Thr	Phe	Ile	Leu	Glu	Arg	Arg	Ser	Leu	Leu	Glu
225					230				235					240	
Met	Tyr	Ala	Asp	Phe	Phe	Ala	His	Pro	Asp	Leu	Phe	Val	Ser	Ile	Ser
			245						250					255	
Asp	Gln	Lys	Asp	Pro	Lys	Asp	Arg	Met	Val	Gln	Val	Val	Lys	Trp	Tyr

260 265 270  
 Leu Ser Ala Phe His Ala Gly Arg Lys Gly Ser Val Ala Lys Lys Pro  
 275 280 285  
 Tyr Asn Pro Ile Leu Gly Glu Ile Phe Gln Cys His Trp Thr Leu Pro  
 290 295 300  
 Asn Asp Thr Glu Glu Asn Thr Glu Leu Val Ser Glu Gly Pro Val Pro  
 305 310 315 320  
 Trp Val Ser Lys Asn Ser Val Thr Phe Val Ala Glu Gln Val Ser His  
 325 330 335  
 His Pro Pro Ile Ser Ala Phe Tyr Ala Glu Cys Phe Asn Lys Lys Ile  
 340 345 350  
 Gln Phe Asn Ala His Ile Trp Thr Lys Ser Lys Phe Leu Gly Met Ser  
 355 360 365  
 Ile Gly Val His Asn Ile Gly Gln Gly Cys Val Ser Cys Leu Asp Tyr  
 370 375 380  
 Asp Glu His Tyr Ile Leu Thr Phe Pro Asn Gly Tyr Gly Arg Ser Ile  
 385 390 395 400  
 Leu Thr Val Pro Trp Val Glu Leu Gly Gly Glu Cys Asn Ile Asn Cys  
 405 410 415  
 Ser Lys Thr Gly Tyr Ser Ala Asn Ile Ile Phe His Thr Lys Pro Phe  
 420 425 430  
 Tyr Gly Gly Lys Lys His Arg Ile Thr Ala Glu Ile Phe Ser Pro Asn  
 435 440 445  
 Asp Lys Lys Ser Phe Cys Ser Ile  
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&lt;210&gt; 4075

&lt;211&gt; 2492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4075

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<211> 410

<212> PRT

<213> Homo sapiens

<400> 4076

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Ala	Gly	Ile	His	Arg	Asn	Leu	Gly	Val	His	Ile	Ser	Arg	Val	Lys	Ser	35	40	45	
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&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4077

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&lt;210&gt; 4078

&lt;211&gt; 194

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4078

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Thr Cys Arg Glu Ala Met Glu Ala Arg Leu Leu Leu Gln Leu Gln Asp
      65      70      75      80
Arg Gln His Phe Val Glu Asn Asp Glu Met Tyr Ser Val Gln Asp Leu
      85      90      95
Leu Asp Val His Ala Gly Arg Leu Gly Cys Ser Leu Thr Glu Ile His
      100      105      110
Thr Leu Phe Ala Lys His Ile Lys Leu Asp Cys Glu Arg Cys Gln Ala
      115      120      125
Lys Gly Phe Val Cys Glu Leu Cys Arg Glu Gly Asp Val Leu Phe Pro
      130      135      140
Phe Asp Ser His Thr Ser Val Cys Ala Asp Cys Ser Ala Val Phe His
      145      150      155      160
Arg Asp Cys Tyr Tyr Asp Asn Ser Thr Thr Cys Pro Lys Cys Ala Arg
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Leu Ser Leu Arg Lys Gln Ser Leu Phe Gln Glu Pro Gly Pro Asp Val
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Glu Ala

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&lt;210&gt; 4079

&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4079

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 Arg Ala Gln Pro Ser Pro Glu Arg Thr Leu His Ser Asn Leu Pro Gln  
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 Phe Ala Gly Val Thr Thr His Gln Glu Leu Phe Pro His Ser Leu Leu  
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 Thr Pro Gln Ser Pro Leu Val Arg Pro Ser Met Tyr Asp Tyr Tyr Asp  
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 Tyr Thr Gly Tyr Asp Met Glu Asp Ala Met Ile Val Asn Lys Ala Ser  
 165 170 175  
 Trp Glu Arg Gly Phe Ala His Gly Ser Val Tyr Lys Ser Glu Phe Ile  
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<212> PRT

<213> Homo sapiens

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 tggctgccgc tgggcgggaa cccaacagg gcccgggag ggaaccctgc cccaacccc  
 2460  
 ccacagcaag gctgtacagt ctgcctctg gaagactgag ctgggacccc cacagccatc  
 2520  
 cgctggcttg gccagcagaa ccagcccaa gccagcacct ttggtaaata aagcagcatc  
 2580  
 tgagatttta aaaaaaaaaa aaaaaaaccc cggaaatttt tgaattggta aattcgga  
 2640  
 acccccgatt tttcttttaa ctgtccctg ttt  
 2673

&lt;210&gt; 4086

&lt;211&gt; 789

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4086

Gly	Phe	Asn	Thr	Ser	Gln	Gly	Lys	Leu	Leu	Arg	Thr	Ile	Phe	Phe	Gly
1				5				10					15		
Val	Lys	Arg	Val	Thr	Ala	Asn	Asn	Leu	Glu	Thr	Phe	Ile	Phe	Ile	Leu
			20					25					30		
Phe	Leu	Leu	Val	Phe	Ala	Ile	Ala	Ala	Ala	Tyr	Val	Trp	Ile	Glu	
		35					40					45			
Gly	Thr	Lys	Asp	Pro	Ser	Arg	Asn	Arg	Tyr	Lys	Leu	Phe	Leu	Glu	Cys
		50				55				60					
Thr	Leu	Ile	Leu	Thr	Ser	Val	Val	Pro	Pro	Glu	Leu	Pro	Ile	Glu	Leu
65					70					75				80	
Ser	Leu	Ala	Val	Asn	Thr	Ser	Leu	Ile	Ala	Leu	Ala	Lys	Leu	Tyr	Met
			85						90					95	
Tyr	Cys	Thr	Glu	Pro	Phe	Arg	Ile	Pro	Phe	Ala	Gly	Lys	Val	Glu	Val
			100					105					110		
Cys	Cys	Phe	Asp	Lys	Thr	Gly	Thr	Leu	Thr	Ser	Asp	Ser	Leu	Val	Val
		115				120					125				
Arg	Gly	Val	Ala	Gly	Leu	Arg	Asp	Gly	Lys	Glu	Val	Thr	Pro	Val	Ser
		130				135					140				
Ser	Ile	Pro	Val	Glu	Thr	His	Arg	Ala	Leu	Ala	Ser	Cys	His	Ser	Leu
145					150					155				160	
Met	Gln	Leu	Asp	Asp	Gly	Thr	Leu	Val	Gly	Asp	Pro	Leu	Glu	Lys	Ala
			165						170					175	
Met	Leu	Thr	Ala	Val	Asp	Trp	Thr	Leu	Thr	Lys	Asp	Glu	Lys	Val	Phe
			180					185						190	
Pro	Arg	Ser	Ile	Lys	Thr	Gln	Gly	Leu	Lys	Ile	His	Gln	Arg	Phe	His

195 200 205  
 Phe Ala Ser Ala Leu Lys Arg Met Ser Val Leu Ala Ser Tyr Glu Lys  
 210 215 220  
 Leu Gly Ser Thr Asp Leu Cys Tyr Ile Ala Ala Val Lys Gly Ala Pro  
 225 230 235 240  
 Glu Thr Leu His Ser Met Phe Ser Gln Cys Pro Pro Asp Tyr His His  
 245 250 255  
 Ile His Thr Glu Ile Ser Arg Glu Gly Ala Arg Val Leu Ala Leu Gly  
 260 265 270  
 Tyr Lys Glu Leu Gly His Leu Thr His Gln Gln Ala Arg Glu Val Lys  
 275 280 285  
 Arg Glu Ala Leu Glu Cys Ser Leu Lys Phe Val Gly Phe Ile Val Val  
 290 295 300  
 Ser Cys Pro Leu Lys Ala Asp Ser Lys Ala Val Ile Arg Glu Ile Gln  
 305 310 315 320  
 Asn Ala Ser His Arg Val Val Met Ile Thr Gly Asp Asn Pro Leu Thr  
 325 330 335  
 Ala Cys His Val Ala Gln Glu Leu His Phe Ile Glu Lys Ala His Thr  
 340 345 350  
 Leu Ile Leu Gln Pro Pro Ser Glu Lys Gly Arg Gln Cys Glu Trp Arg  
 355 360 365  
 Ser Ile Asp Gly Ser Ile Val Leu Pro Leu Xaa Pro Gly Ala Pro Gln  
 370 375 380  
 Arg His Trp Pro Trp Ser Thr His Xaa Cys Leu Thr Gly Asp Gly Leu  
 385 390 395 400  
 Ala His Leu Gln Ala Thr Asp Pro Gln Gln Leu Leu Arg Leu Ile Pro  
 405 410 415  
 His Val Gln Val Phe Ala Arg Val Ala Pro Lys Gln Lys Glu Phe Val  
 420 425 430  
 Ile Thr Ser Leu Lys Glu Leu Gly Tyr Val Thr Leu Met Cys Gly Asp  
 435 440 445  
 Gly Thr Asn Asp Val Gly Ala Leu Lys His Ala Asp Val Gly Val Ala  
 450 455 460  
 Leu Leu Ala Asn Ala Pro Glu Arg Val Val Glu Arg Arg Arg Arg Pro  
 465 470 475 480  
 Arg Asp Ser Pro Thr Leu Ser Asn Ser Gly Ile Arg Ala Thr Ser Arg  
 485 490 495  
 Thr Ala Lys Gln Arg Ser Gly Leu Pro Pro Ser Glu Glu Gln Pro Thr  
 500 505 510  
 Ser Gln Arg Asp Arg Leu Ser Gln Val Leu Arg Asp Leu Glu Asp Glu  
 515 520 525  
 Ser Thr Pro Ile Val Lys Leu Gly Asp Ala Ser Ile Ala Ala Pro Phe  
 530 535 540  
 Thr Ser Lys Leu Ser Ser Ile Gln Cys Ile Cys His Val Ile Lys Gln  
 545 550 555 560  
 Gly Arg Cys Thr Leu Val Thr Thr Leu Gln Met Phe Lys Ile Leu Ala  
 565 570 575  
 Leu Asn Ala Leu Ile Leu Ala Tyr Ser Gln Ser Val Leu Tyr Leu Glu  
 580 585 590  
 Gly Val Lys Phe Ser Asp Phe Gln Ala Thr Leu Gln Gly Leu Leu Leu  
 595 600 605  
 Ala Gly Cys Phe Leu Phe Ile Ser Arg Ser Lys Pro Leu Lys Thr Leu  
 610 615 620  
 Ser Arg Glu Arg Pro Leu Pro Asn Ile Phe Asn Leu Tyr Thr Ile Leu

625                      630                      635                      640  
 Thr Val Met Leu Gln Phe Phe Val His Phe Leu Ser Leu Val Tyr Leu  
                                  645                      650                      655  
 Tyr Arg Glu Ala Gln Ala Arg Ser Pro Xaa Arg Xaa Gln Glu Gln Phe  
                                  660                      665                      670  
 Val Asp Leu Tyr Lys Glu Phe Glu Pro Ser Leu Val Asn Ser Thr Val  
                                  675                      680                      685  
 Tyr Ile Met Ala Met Ala Met Gln Met Ala Thr Phe Ala Ile Asn Tyr  
                                  690                      695                      700  
 Lys Gly Pro Pro Phe Met Glu Ser Leu Pro Glu Asn Lys Pro Leu Val  
 705                                   710                      715                      720  
 Trp Ser Leu Ala Val Ser Leu Leu Ala Ile Ile Gly Leu Leu Leu Gly  
                                  725                      730                      735  
 Ser Ser Pro Asp Phe Asn Ser Gln Phe Gly Leu Val Asp Ile Pro Val  
                                  740                      745                      750  
 Glu Phe Lys Leu Val Ile Ala Gln Val Leu Leu Leu Asp Phe Cys Leu  
                                  755                      760                      765  
 Ala Leu Leu Ala Asp Arg Val Leu Gln Phe Phe Leu Gly Thr Pro Lys  
                                  770                      775                      780  
 Leu Lys Val Pro Ser  
 785

<210> 4087

<211> 959

<212> DNA

<213> Homo sapiens

<400> 4087

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 120  
 ggcccagatt gccaaaacaa aggggatttg gtgatggagg ctttgttaga aggaatacaa  
 180  
 aatcgagggc atggtggggg atttttgaca tcttgcaag cagaactaca ggagctcatg  
 240  
 aaacagattg acataatggt ggctcataaa aaatctgaat gggaaggacg tacacatgct  
 300  
 ctagaaactt gcttgaaaat ccgtgaacag gaacttaaga gtcttaggag tcagttggat  
 360  
 gtgacacata aggaggttgg aatgttgcag cagcaggtag aagaacatga aaaaatcaag  
 420  
 caagagatga ccatggaata taagcaggag ttgaagaaac tacatgaaga attatgcata  
 480  
 ctgaagagaa gctatgaaaa gcttcagaaa aagcaaatga gggaattcag aggaatacc  
 540  
 aaaaatcaca gggaagatcg gtctgaaatt gagagggtta ctgcaaaaat agaggaattc  
 600  
 cgtcagaaat cgctggactg ggagaagcaa cgcttgattt atcagcaaca ggtatcttca  
 660  
 ctggaggcac aaaggaaggc tctggctgaa caatcagaga taattcaggc tcagcttgct  
 720  
 aatcggaaac agaaattaga gtctgtggaa ctttctagcc aatcagaaat tcaacactta  
 780

agcagtaaac tggagcgggc taatgacact atctgtgccca atgagttgga aatagagcgc  
 840  
 ctcacccatga gggatcaatga cttgggttgga accagtatga ctgtcctaca ggagcagcag  
 900  
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 959

<210> 4088

<211> 319

<212> PRT

<213> Homo sapiens

<400> 4088

Arg	Gly	Ser	Leu	Glu	Lys	Ala	Leu	Phe	Gln	Leu	Leu	Lys	Val	Trp	Gly
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Gln	Trp	Ala	Glu	Gln	Thr	Arg	Arg	Leu	Gln	Arg	Leu	Asp	Val	Ser	Leu
		20						25					30		
Ala	Val	Ala	Arg	Val	Arg	Ser	Ala	Gly	Pro	Ser	Cys	Gln	Asn	Lys	Gly
		35					40					45			
Asp	Leu	Val	Met	Glu	Ala	Leu	Glu	Gly	Ile	Gln	Asn	Arg	Gly	His	
	50					55				60					
Gly	Gly	Gly	Phe	Leu	Thr	Ser	Cys	Glu	Ala	Glu	Leu	Gln	Glu	Leu	Met
65					70					75					80
Lys	Gln	Ile	Asp	Ile	Met	Val	Ala	His	Lys	Lys	Ser	Glu	Trp	Glu	Gly
			85						90					95	
Arg	Thr	His	Ala	Leu	Glu	Thr	Cys	Leu	Lys	Ile	Arg	Glu	Gln	Glu	Leu
		100						105					110		
Lys	Ser	Leu	Arg	Ser	Gln	Leu	Asp	Val	Thr	His	Lys	Glu	Val	Gly	Met
	115					120						125			
Leu	His	Gln	Gln	Val	Glu	Glu	His	Glu	Lys	Ile	Lys	Gln	Glu	Met	Thr
	130					135					140				
Met	Glu	Tyr	Lys	Gln	Glu	Leu	Lys	Lys	Leu	His	Glu	Glu	Leu	Cys	Ile
145				150						155					160
Leu	Lys	Arg	Ser	Tyr	Glu	Lys	Leu	Gln	Lys	Lys	Gln	Met	Arg	Glu	Phe
			165					170						175	
Arg	Gly	Asn	Thr	Lys	Asn	His	Arg	Glu	Asp	Arg	Ser	Glu	Ile	Glu	Arg
		180						185					190		
Leu	Thr	Ala	Lys	Ile	Glu	Glu	Phe	Arg	Gln	Lys	Ser	Leu	Asp	Trp	Glu
	195						200					205			
Lys	Gln	Arg	Leu	Ile	Tyr	Gln	Gln	Gln	Val	Ser	Ser	Leu	Glu	Ala	Gln
	210					215					220				
Arg	Lys	Ala	Leu	Ala	Glu	Gln	Ser	Glu	Ile	Ile	Gln	Ala	Gln	Leu	Val
225					230					235					240
Asn	Arg	Lys	Gln	Lys	Leu	Glu	Ser	Val	Glu	Leu	Ser	Ser	Gln	Ser	Glu
			245						250					255	
Ile	Gln	His	Leu	Ser	Ser	Lys	Ile	Glu	Arg	Ala	Asn	Asp	Thr	Ile	Cys
		260						265					270		
Ala	Asn	Glu	Leu	Glu	Ile	Glu	Arg	Leu	Thr	Met	Arg	Val	Asn	Asp	Leu
	275						280					285			
Val	Gly	Thr	Ser	Met	Thr	Val	Leu	Gln	Glu	Gln	Gln	Lys	Glu	Glu	
	290					295					300				
Lys	Leu	Arg	Glu	Ser	Glu	Lys	Leu	Leu	Glu	Ala	Leu	Gln	Glu	Lys	
305					310					315					

<210> 4089  
 <211> 511  
 <212> DNA  
 <213> Homo sapiens

<400> 4089  
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 60  
 ctttgtcttg cgtctttatt tctatgttct cttgtctctg cacatgggga gaaaccacc  
 120  
 aacctgtgg ggctggcccc tacacagttt ttaaggggta cagggaaggg aagaaacagg  
 180  
 caccatgtgg ggcagggggt ctgcttctat catatttcca tttgttggtt ttaggagatc  
 240  
 ctccaactc tactaacat tattttccag agaacaaaag aaaaactatg ctctccaaga  
 300  
 acatgtttcc tttgtaattt ttctgtcttc aaactttttc tggagagatg agtcatttga  
 360  
 cctgacattg agaataggct tgaagccctt tgagaggaca aaggagatag agtcagcatt  
 420  
 cctatctcca tgctctgaag atccaagtca cttggttact gctccctggg ctgtctattt  
 480  
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 511

<210> 4090  
 <211> 109  
 <212> PRT  
 <213> Homo sapiens

<400> 4090  
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 Arg Arg Ser Phe Gln Leu Ser Leu Thr Leu Phe Ser Arg Glu Gln Lys  
 20 25 30  
 Lys Asn Tyr Ala Leu Gln Glu His Val Ser Phe Val Ile Phe Leu Ser  
 35 40 45  
 Ser Asn Phe Phe Trp Arg Asp Glu Ser Phe Asp Leu Thr Leu Arg Ile  
 50 55 60  
 Gly Leu Lys Pro Phe Glu Arg Thr Lys Glu Ile Glu Ser Ala Phe Leu  
 65 70 75 80  
 Ser Pro Cys Ser Glu Asp Pro Ser His Leu Val Thr Ala Pro Trp Ala  
 85 90 95  
 Val Tyr Phe His Cys Leu Trp Lys Ile Glu Tyr Thr Cys  
 100 105

<210> 4091  
 <211> 1526  
 <212> DNA  
 <213> Homo sapiens

<400> 4091  
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 60

gtgcccagcg gctccggacg tgctacgggg tgcgagcgcg ggggagttcg gggcgcacga  
120  
caaggaaggg cccccgggag ctctatatgg aggaaggagc ccagaatggg gtgcaccagg  
180  
aagacaaaaa ctttggtgtc cacttgcggtg atcctgagcg gcatgactaa catcatctgc  
240  
ctgctctacg tgggctgggt caccaactac atcgccagcg tgtatgtgcg ggggcaggag  
300  
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360  
ctggaccacc tggagaatgt catcaagcag cacattcaag gctataggag aaatttctcc  
420  
cttctgaatg tgtccaacta actctgttca cctgagaaat catattcccc agctctgggt  
480  
atccctgaat aaccacagga gaacagttcc aggcctgat aagtcagcta ttgcaagggg  
540  
gacctggctg gaagatatga aggaaaaata tcattcttga actaataagt tgagagatca  
600  
cagccttcag gggaccagaa ggggaaggctg aacagagaag ggcaatttca cgttcgccat  
660  
gtccatattt ctatcgtcac gagccatctc accttacagg cagggaagtt ttgagcttag  
720  
agaatgggat gcgtcaagaa aaccgtgggt ccccgagctc tgttcctgga ttcagtgcct  
780  
gttggttcat cctgtgtaga ctggagtcag ggtctacaca gttggaattc tatggaacca  
840  
agatgctgtg tggcagatgg atgtggactc caactgtgac aatccagaag gccttgggga  
900  
cttggttcat gaacagctcc ctgtaggac tctgttgggg tgggggatc taggggcatc  
960  
tccgcagttt tcttctgaaa aaaaaacgaa tacaagttgg gcaggtgcaa caactgtgca  
1020  
tgcagtcctc tcccagggtt ggctagcagt attgttgggt accgtaagca cttagcattg  
1080  
ttaagtgagc ataagtaaca agatgcaaca gcctctggcc aagttttgaa gattttgttt  
1140  
taaagtatgc ttttagatgt tgacattcat gattattaaa aggaacaaaa ctcaatttgg  
1200  
ggtctcaaga gccacaattc tagacttcta ggatgtcagg agccatgctc ttaagcttct  
1260  
caccctgctg ttttaatgag attaatgatt attttccact gagcacctac ctgtgatgtt  
1320  
cataaaaaag tgaaataaat gactcacatg gagatttggg aggatatcac tgtggaaagt  
1380  
agatgttaac agcctctaga aatatgataa ttatcagcta tttgagatgc agtcactgta  
1440  
atgtgataac aagatgtgtt gtgcaggtag aaagcatgga gagaaatggc acaaagtaga  
1500  
gttataagaa aaaaaaaaaa aaaaaa  
1526

&lt;210&gt; 4092

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4092

His Gly Gly Tyr Thr Gly Ser Gly Pro Gly Phe Gly Glu Pro Arg Asp  
 1 5 10 15  
 Ser Gly Ala Glu Val Pro Ser Gly Ser Gly Arg Ala Thr Gly Cys Glu  
 20 25 30  
 Arg Gly Gly Val Arg Gly Ala Arg Gln Gly Arg Ala Pro Gly Ser Ser  
 35 40 45  
 Ile Trp Arg Lys Glu Pro Arg Met Val Cys Thr Arg Lys Thr Lys Thr  
 50 55 60  
 Leu Val Ser Thr Cys Val Ile Leu Ser Gly Met Thr Asn Ile Ile Cys  
 65 70 75 80  
 Leu Leu Tyr Val Gly Trp Val Thr Asn Tyr Ile Ala Ser Val Tyr Val  
 85 90 95  
 Arg Gly Gln Glu Pro Ala Pro Asp Lys Lys Leu Glu Glu Asp Lys Gly  
 100 105 110  
 Asp Thr Leu Lys Ile Ile Glu Arg Leu Asp His Leu Glu Asn Val Ile  
 115 120 125  
 Lys Gln His Ile Gln Gly Tyr Arg Arg Asn Phe Ser Leu Leu Asn Val  
 130 135 140  
 Ser Asn  
 145

&lt;210&gt; 4093

&lt;211&gt; 1519

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4093

nngggccgcg gccggcagaa gggctgtag gagggaccac gcgcccgggg cgcgatctct  
 60  
 ggcagggggc ggtgtgcagc ggaacatgc acataggcgc ccacgccgac taccctccc  
 120  
 gaggaaga ggccggggcg cgctgggggg tgagagcatg agggaggccg gggggggctg  
 180  
 cttggagcgc tgctagggag cggcgccgc gcacaccgc ctgggcgcgg cggagggcgg  
 240  
 ggagcgggca ggtcgcgcct cggcgagcg accgccggga gctgttctga tttccgacgc  
 300  
 gcacctaggg gcccgagca gccccgccc cggcgcgccg ccgacatggg caacgcaggg  
 360  
 agcatggatt cgcagcagac cgatttcagg gcgcacaacg tgcctttgaa gctgccgatg  
 420  
 ccagagccag gtgaactgga ggagcgattt gccatcgtgc tgaacgctat gaacctacct  
 480  
 cctgacaaag ccaggttact gcggcagtat gataatgaga aaaaatggga actgatttgt  
 540  
 gatcaggaac gattccaggt gaagaatcct cccatacat acattcaaaa gctcaaaggc  
 600  
 tatctggatc cagctgtaac caggaagaaa ttcagacggc gtgttcaaga atctacacaa  
 660  
 gtgctaagag aactggaaat ttctttaaga actaaccaca ttggatgggt cagagaattt  
 720

ctgaatgaag aaaacaaagg tcttgatggt ctagtggaat atctctcatt tgcacagtac  
 780  
 gcggtaactt ttgactttga aagtgtggag agtactgtgg agagctcggt ggacaaatca  
 840  
 aagccctgga gtaggtccat cgaggacctg cacagaggga gcaacctgcc ctcacctgtg  
 900  
 ggcaacagtg tctcccgtc tggaagacat tctgcactgc gatataatac attgccaagc  
 960  
 agaagaactc tgaaaaattc aagattagt agtaagaaag atgatgtgca tgtctgtatc  
 1020  
 atgtgtttac gtgccatcat gaattatcag tatggtttca acatgggtcat gtctcatcca  
 1080  
 cacgtgtgca atgagattgc actaagcctg aacaacaaga atcccagaac aaaagccctt  
 1140  
 gtcttagaac tgttggcagc cgtttgtctt gtcagaggcg ggcatgaaat cattttatca  
 1200  
 gcatttgata actttaaaaga ggtttgtgga gaaaaacagc gctttgagaa gttgatggaa  
 1260  
 catttcagga atgaagacaa taacatagat tttatgggtg cttctatgca gtttattaat  
 1320  
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 1380  
 aaattaggcc tggacgaata cttggacaag ctgaaacaca ctgagagtga caagcttcaa  
 1440  
 gtccagatcc aggttacct ggacaatggt tttgatgtag gagctctact ggaagatgct  
 1500  
 gaaactaaga atgctgcag  
 1519

&lt;210&gt; 4094

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4094

Met	Gly	Asn	Ala	Gly	Ser	Met	Asp	Ser	Gln	Gln	Thr	Asp	Phe	Arg	Ala
1				5					10					15	
His	Asn	Val	Pro	Leu	Lys	Leu	Pro	Met	Pro	Glu	Pro	Gly	Glu	Leu	Glu
			20					25					30		
Glu	Arg	Phe	Ala	Ile	Val	Leu	Asn	Ala	Met	Asn	Leu	Pro	Pro	Asp	Lys
		35					40					45			
Ala	Arg	Leu	Leu	Arg	Gln	Tyr	Asp	Asn	Glu	Lys	Lys	Trp	Glu	Leu	Ile
		50				55					60				
Cys	Asp	Gln	Glu	Arg	Phe	Gln	Val	Lys	Asn	Pro	Pro	His	Thr	Tyr	Ile
65					70				75					80	
Gln	Lys	Leu	Lys	Gly	Tyr	Leu	Asp	Pro	Ala	Val	Thr	Arg	Lys	Lys	Phe
			85					90					95		
Arg	Arg	Arg	Val	Gln	Glu	Ser	Thr	Gln	Val	Leu	Arg	Glu	Leu	Glu	Ile
			100					105					110		
Ser	Leu	Arg	Thr	Asn	His	Ile	Gly	Trp	Val	Arg	Glu	Phe	Leu	Asn	Glu
		115				120					125				
Glu	Asn	Lys	Gly	Leu	Asp	Val	Leu	Val	Glu	Tyr	Leu	Ser	Phe	Ala	Gln
	130					135					140				
Tyr	Ala	Val	Thr	Phe	Asp	Phe	Glu	Ser	Val	Glu	Ser	Thr	Val	Glu	Ser



145                      150                      155                      160  
 Ser Val Asp Lys Ser Lys Pro Trp Ser Arg Ser Ile Glu Asp Leu His  
                                  165                      170                      175  
 Arg Gly Ser Asn Leu Pro Ser Pro Val Gly Asn Ser Val Ser Arg Ser  
                                  180                      185                      190  
 Gly Arg His Ser Ala Leu Arg Tyr Asn Thr Leu Pro Ser Arg Arg Thr  
                                  195                      200                      205  
 Leu Lys Asn Ser Arg Leu Val Ser Lys Lys Asp Asp Val His Val Cys  
                                  210                      215                      220  
 Ile Met Cys Leu Arg Ala Ile Met Asn Tyr Gln Tyr Gly Phe Asn Met  
 225                      230                      235                      240  
 Val Met Ser His Pro His Ala Val Asn Glu Ile Ala Leu Ser Leu Asn  
                                  245                      250                      255  
 Asn Lys Asn Pro Arg Thr Lys Ala Leu Val Leu Glu Leu Leu Ala Ala  
                                  260                      265                      270  
 Val Cys Leu Val Arg Gly Gly His Glu Ile Ile Leu Ser Ala Phe Asp  
                                  275                      280                      285  
 Asn Phe Lys Glu Val Cys Gly Glu Lys Gln Arg Phe Glu Lys Leu Met  
                                  290                      295                      300  
 Glu His Phe Arg Asn Glu Asp Asn Asn Ile Asp Phe Met Val Ala Ser  
 305                      310                      315                      320  
 Met Gln Phe Ile Asn Ile Val Val His Ser Val Glu Asp Met Asn Phe  
                                  325                      330                      335  
 Arg Val His Leu Gln Tyr Glu Phe Thr Lys Leu Gly Leu Asp Glu Tyr  
                                  340                      345                      350  
 Leu Asp Lys Leu Lys His Thr Glu Ser Asp Lys Leu Gln Val Gln Ile  
                                  355                      360                      365  
 Gln Ala Tyr Leu Asp Asn Val Phe Asp Val Gly Ala Leu Leu Glu Asp  
                                  370                      375                      380  
 Ala Glu Thr Lys Asn Ala Ala  
 385                      390

&lt;210&gt; 4095

&lt;211&gt; 253

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4095

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 60  
 agggtcagat agtgggggggt ggggttcagct ccaactgtcca ggtgaggaaa ctgaggctga  
 120  
 agagagatca agtagcatcc ccagcgaaat ctgaggcctc tggaggcgcc tgtgcacgtg  
 180  
 tgtctggaag tgtgtgtcca ggcagcatat ctgcatgtgt gtgcctgtcc agacagcata  
 240  
 tctgtgcacg cgt  
 253

&lt;210&gt; 4096

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4096

```

Met Gly Gly Gly Glu Gln Ala Ser Ala Gly Arg Val Pro Lys Arg Gln
 1           5           10           15
Pro Arg Glu Gln Gly Gln Ile Val Gly Gly Gly Phe Ser Ser Thr Val
      20           25           30
Gln Val Arg Lys Leu Arg Leu Lys Arg Asp Gln Val Ala Ser Pro Ala
      35           40           45
Lys Ser Glu Ala Ser Gly Gly Ala Cys Ala Arg Val Ser Gly Ser Val
      50           55           60
Cys Pro Gly Ser Ile Ser Ala Cys Val Cys Leu Ser Arg Gln His Ile
65           70           75           80
Cys Ala Arg

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&lt;210&gt; 4097

&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4097

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60
ctgggacgcg tgccgcgcac tggcacggca ggggcgcgag ccaggctgca cgattcactg
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240
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300
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360
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420
cctaattggg attcggcaga gtttgatttg ttgtttgaaa atgcttttga ccagtgggta
480
gccagcacag cgtcagaaaa atgcaccttc ttccagatcc tccaccatac ctgccagagg
540
tacctcacgg acaggaagcc agagtttatt aactgccaat ccaaaattat gggaggaaac
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720
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780
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840
aagaattcgg gacctccgct tgcttctttt tttccaatat ttggacactt agagtgggtt
900
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960
aatgatcttg ctaataaatg ctacaatagc atcagcttca ttttgggttt ttgcctcctc
1020

```

ccactgtgtg tatgtgtgta tatgtatgtt ttgaatatgt tttctttatt aaaaaatatt  
 1080  
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 1140  
 aacatgtatt tttttctctg atattaagca ggaaggcatt ttaatgtggt gacatcagat  
 1200  
 gttatttttc ctagatgaaa ataaaagtca agcagtgatt agtttcactc actgtcctag  
 1260  
 ctacacttaa tttgaagatt aaaattctac attgtggaaa acaattgaat ttattgggaa  
 1320  
 aaacagcagt cttagatttt gctccttgca tagtaatctt ttgcatgaac catcaccagc  
 1380  
 gttca  
 1385

&lt;210&gt; 4098

&lt;211&gt; 258

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4098

Ser	Gly	Ala	Arg	Ser	Pro	Glu	Pro	Arg	Ala	Gly	Gln	Pro	Pro	Gly	Glu
1				5					10					15	
Glu	Pro	Arg	Ala	Leu	Gly	Arg	Val	Pro	Arg	Thr	Gly	Thr	Ala	Gly	Ala
			20					25					30		
Arg	Ala	Arg	Leu	His	Asp	Ser	Leu	Arg	Ala	Val	Leu	Thr	Cys	Ser	Thr
		35					40					45			
Met	Ser	Ala	Lys	Ser	Ala	Ile	Ser	Lys	Glu	Ile	Phe	Ala	Pro	Leu	Asp
	50					55					60				
Glu	Arg	Met	Leu	Gly	Ala	Val	Gln	Val	Lys	Arg	Arg	Thr	Lys	Lys	Lys
65					70				75					80	
Ile	Pro	Phe	Leu	Ala	Thr	Gly	Gly	Gln	Gly	Glu	Tyr	Leu	Thr	Tyr	Ile
			85					90						95	
Cys	Leu	Ser	Val	Thr	Asn	Lys	Lys	Pro	Thr	Gln	Ala	Ser	Ile	Thr	Lys
			100					105					110		
Val	Lys	Gln	Phe	Glu	Gly	Ser	Thr	Ser	Phe	Val	Arg	Arg	Ser	Gln	Trp
		115					120					125			
Met	Leu	Glu	Gln	Leu	Arg	Gln	Val	Asn	Gly	Ile	Asp	Pro	Asn	Gly	Asp
	130					135					140				
Ser	Ala	Glu	Phe	Asp	Leu	Leu	Phe	Glu	Asn	Ala	Phe	Asp	Gln	Trp	Val
145					150					155				160	
Ala	Ser	Thr	Ala	Ser	Glu	Lys	Cys	Thr	Phe	Phe	Gln	Ile	Leu	His	His
			165					170						175	
Thr	Cys	Gln	Arg	Tyr	Leu	Thr	Asp	Arg	Lys	Pro	Glu	Phe	Ile	Asn	Cys
			180					185					190		
Gln	Ser	Lys	Ile	Met	Gly	Gly	Asn	Ser	Ile	Leu	His	Ser	Ala	Ala	Asp
	195						200					205			
Ser	Val	Thr	Ser	Ala	Val	Gln	Lys	Ala	Ser	Gln	Ala	Leu	Asn	Glu	Arg
	210					215					220				
Gly	Glu	Arg	Leu	Gly	Arg	Ala	Glu	Glu	Lys	Thr	Glu	Asp	Leu	Lys	Asn
225					230					235				240	
Ser	Ala	Gln	Gln	Phe	Ala	Glu	Thr	Ala	His	Lys	Leu	Ala	Met	Lys	His
			245					250						255	

Lys Cys

&lt;210&gt; 4099

&lt;211&gt; 511

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4099

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 60  
 attagggaaa gggttttctgt gaaattacct tctgattgta gccacatgaa acacatcaac  
 120  
 ttaacaata aaaaattgta taatggaatt ggatcagggg gttcccaaaa ccccttcac  
 180  
 tgagggttgg caattcactg agaaggactc acaggactca gcagatagtc atacttgggg  
 240  
 ctttgattta ttacatttaa tacagcaaaa agacacaaaag caacatttga gaaaggaaaa  
 300  
 ggtgcatgtg tcaaagtctg gaggaagcca ggcacaagct acaggagtca tctcctgtgt  
 360  
 agctagcagg atatgcttaa ttccccagc ctcaaatttt gacgacacat gtgcaatgtt  
 420  
 gtctacctta ccagagtttc attagaggct cagcacccat gttttcgatg gaggctagtc  
 480  
 acataggcaa cctctcctct ccctcacgcg t  
 511

&lt;210&gt; 4100

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4100

Met	Glu	Leu	Asp	Gln	Gly	Val	Pro	Lys	Thr	Pro	Phe	Thr	Glu	Val	Trp
1				5					10					15	
Gln	Phe	Thr	Glu	Lys	Asp	Ser	Gln	Asp	Ser	Ala	Asp	Ser	His	Thr	Trp
			20					25					30		
Gly	Phe	Asp	Leu	Leu	His	Leu	Ile	Gln	Gln	Lys	Asp	Thr	Lys	Gln	His
			35				40					45			
Leu	Arg	Lys	Glu	Lys	Val	His	Val	Ser	Lys	Ser	Gly	Gly	Ser	Gln	Ala
			50				55				60				
Gln	Ala	Thr	Gly	Val	Ile	Ser	Cys	Val	Ala	Ser	Arg	Ile	Cys	Leu	Ile
65					70				75					80	
Pro	Pro	Ala	Ser	Asn	Phe	Asp	Asp	Thr	Cys	Ala	Met	Leu	Ser	Thr	Leu
				85				90					95		
Pro	Glu	Phe	His												
			100												

&lt;210&gt; 4101

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4101

tttttttttt tttttttttt tttttttttt tttttgagga accccagaaa tgtgtttatt  
 60  
 aagttggact cgtattgctg tgtgggggtcc cagtgcacgc gtgtgcaccc gctacaagat  
 120  
 ccaggaaaga tggcacacgg cagacgacga caggaaggac acctgctccc cacccttccc  
 180  
 gggaccccg c catgtgcaaa attcgagctg gggctctgcag ctgcttggag agaccaggg  
 240  
 cctcttgctc cacagcctgc aaggctctgag caggcaacgg ccctggggcg gtgaggcccc  
 300  
 cgcttggtca ctccccgcgc ccccatgca ggcagtggag gggaggacac gcaggaggac  
 360  
 cagacgctaa aggtgtaaac gggcagccgt ggcactctc acctctcaat aaataagata  
 420  
 aataactaaa taaataaaca actaaataaa gacatgaagg aatggatgca gagacgtgaa  
 480  
 cggatggcgc aggacgtccc tgggtgggggc cacgggtcccc ttaaggcatg tgggag  
 536

&lt;210&gt; 4102

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4102

Met	Cys	Leu	Leu	Ser	Trp	Thr	Arg	Ile	Ala	Val	Trp	Gly	Pro	Ser	Ala
1				5					10					15	
Arg	Val	Cys	Thr	Arg	Tyr	Lys	Ile	Gln	Glu	Arg	Trp	His	Thr	Ala	Asp
			20					25					30		
Asp	Asp	Arg	Lys	Asp	Thr	Cys	Ser	Pro	Pro	Phe	Pro	Gly	Pro	Arg	His
			35				40					45			
Val	Gln	Asn	Ser	Ser	Trp	Gly	Leu	Gln	Leu	Leu	Gly	Glu	Thr	Gln	Gly
	50					55					60				
Leu	Leu	Leu	His	Ser	Leu	Gln	Gly	Leu	Ser	Arg	Gln	Arg	Pro	Trp	Gly
65					70					75				80	
Gly	Glu	Ala	Pro	Ala	Trp	Ser	Leu	Pro	Ala	Pro	Pro	Met	Gln	Ala	Val
				85				90						95	
Glu	Gly	Arg	Thr	Arg	Arg	Arg	Thr	Arg	Arg						
			100					105							

&lt;210&gt; 4103

&lt;211&gt; 3040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4103

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 120  
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 180  
 caagaggaaa ggaaagaccg acagtccctg gataagccag ccaggaaaag gaggcggaga  
 240

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360  
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540  
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780  
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1080  
ctcgactcgg aaaaacccaa gaagcttcgc ttccacccaa agcagctgta cttctccgcc  
1140  
aggcaagggg agcttcagaa ggtgctcctc atgctggtgg acggaattga ccccaacttc  
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1320  
aggaccccg t gatggaagc agccgaaaac aaccatctgg aagcagtga gtacctcatc  
1380  
aaggctgggg ccttggtgga tccaaggac gcagagggtc ctacgtgttt gcacctggct  
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1920

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 2940  
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 3040

&lt;210&gt; 4104

&lt;211&gt; 978

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4104

Xaa	Ala	Ala	Phe	Pro	Thr	Glu	Asp	Ser	Arg	Thr	Ser	Lys	Glu	Ser	Met
1				5					10					15	
Ser	Glu	Ala	Asp	Arg	Ala	Gln	Lys	Met	Asp	Gly	Glu	Ser	Glu	Glu	Glu
		20						25					30		
Gln	Glu	Ser	Val	Asp	Thr	Gly	Glu	Glu	Glu	Gly	Gly	Asp	Glu	Ser	
		35				40						45			
Asp	Leu	Ser	Ser	Glu	Ser	Ser	Ile	Lys	Lys	Lys	Ser	Gln	Glu	Glu	Arg
	50					55					60				
Lys	Asp	Arg	Gln	Ser	Leu	Asp	Lys	Pro	Ala	Arg	Lys	Arg	Arg	Arg	Arg

```

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Ser Arg Lys Lys Pro Ser Gly Ala Leu Gly Ser Glu Ser Tyr Lys Ser
          85          90          95
Ser Ala Gly Ser Ala Glu Gln Thr Ala Pro Gly Asp Ser Thr Gly Tyr
          100          105          110
Met Glu Val Ser Leu Asp Ser Leu Asp Leu Arg Val Lys Gly Ile Leu
          115          120          125
Ser Ser Gln Ala Glu Gly Leu Ala Asn Gly Pro Asp Val Leu Glu Thr
          130          135          140
Asp Gly Leu Gln Glu Val Pro Leu Cys Ser Cys Arg Met Glu Thr Pro
145          150          155          160
Lys Ser Arg Glu Ile Thr Thr Leu Ala Asn Asn Gln Cys Met Ala Thr
          165          170          175
Glu Ser Val Asp His Glu Leu Gly Arg Cys Thr Asn Ser Val Val Lys
          180          185          190
Tyr Glu Leu Met Arg Pro Ser Asn Lys Ala Pro Leu Leu Val Leu Cys
          195          200          205
Glu Asp His Arg Gly Arg Met Val Lys His Gln Cys Cys Pro Gly Cys
          210          215          220
Gly Tyr Phe Cys Thr Ala Gly Asn Phe Met Glu Cys Gln Pro Glu Ser
225          230          235          240
Ser Ile Ser His Arg Phe His Lys Asp Cys Ala Ser Arg Val Asn Asn
          245          250          255
Ala Ser Tyr Cys Pro His Cys Gly Glu Glu Ser Ser Lys Ala Lys Glu
          260          265          270
Val Thr Ile Ala Lys Ala Asp Thr Thr Ser Thr Val Thr Pro Val Pro
          275          280          285
Gly Gln Glu Lys Gly Ser Ala Xaa Gly Gly Arg Ala Asp Thr Thr Thr
          290          295          300
Gly Ser Ala Xaa Pro Gly His His Ser Arg Arg Thr Thr Ser Cys Arg
305          310          315          320
Val Gln Pro Pro Thr Xaa Pro Glu Gly Phe Asp Pro Thr Gly Pro Ala
          325          330          335
Gly Leu Gly Arg Pro Thr Pro Gly Leu Ser Gln Gly Pro Gly Lys Glu
          340          345          350
Thr Leu Glu Ser Ala Leu Ile Ala Leu Asp Ser Glu Lys Pro Lys Lys
          355          360          365
Leu Arg Phe His Pro Lys Gln Leu Tyr Phe Ser Ala Arg Gln Gly Glu
          370          375          380
Leu Gln Lys Val Leu Leu Met Leu Val Asp Gly Ile Asp Pro Asn Phe
385          390          395          400
Lys Met Glu His Gln Asn Lys Arg Ser Pro Leu His Ala Ala Ala Glu
          405          410          415
Ala Gly His Val Asp Ile Cys His Met Leu Val Gln Ala Gly Ala Asn
          420          425          430
Ile Asp Thr Cys Ser Glu Asp Gln Arg Thr Pro Leu Met Glu Ala Ala
          435          440          445
Glu Asn Asn His Leu Glu Ala Val Lys Tyr Leu Ile Lys Ala Gly Ala
          450          455          460
Leu Val Asp Pro Lys Asp Ala Glu Gly Ser Thr Cys Leu His Leu Ala
465          470          475          480
Ala Lys Lys Gly His Tyr Glu Val Val Gln Tyr Leu Leu Ser Asn Gly
          485          490          495
Arg Met Asp Val Asn Cys Gln Asp Asp Gly Gly Trp Thr Pro Met Ile

```



500										505					510						
Trp	Ala	Thr	Glu	Tyr	Lys	His	Val	Asp	Leu	Val	Lys	Leu	Leu	Leu	Ser						
			515					520				525									
Lys	Gly	Ser	Asp	Ile	Asn	Ile	Arg	Asp	Asn	Glu	Glu	Asn	Ile	Cys	Leu						
			530			535					540										
His	Trp	Ala	Ala	Phe	Ser	Gly	Cys	Val	Asp	Ile	Ala	Glu	Ile	Leu	Leu						
545					550				555						560						
Ala	Ala	Lys	Cys	Asp	Leu	His	Ala	Val	Asn	Ile	His	Gly	Asp	Ser	Pro						
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Leu	His	Ile	Ala	Ala	Arg	Glu	Asn	Arg	Tyr	Asp	Cys	Val	Val	Leu	Phe						
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Leu	Ser	Arg	Asp	Ser	Asp	Val	Thr	Leu	Lys	Asn	Lys	Glu	Gly	Glu	Thr						
		595				600						605									
Pro	Leu	Gln	Cys	Ala	Ser	Leu	Asn	Ser	Gln	Val	Trp	Ser	Ala	Leu	Gln						
		610				615					620										
Met	Ser	Lys	Ala	Leu	Gln	Asp	Ser	Ala	Pro	Asp	Arg	Pro	Ser	Pro	Val						
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Glu	Arg	Ile	Val	Ser	Arg	Asp	Ile	Ala	Arg	Gly	Tyr	Glu	Arg	Ile	Pro						
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Ile	Pro	Cys	Val	Asn	Ala	Val	Asp	Ser	Glu	Pro	Cys	Pro	Ser	Asn	Tyr						
			660				665						670								
Lys	Tyr	Val	Ser	Gln	Asn	Cys	Val	Thr	Ser	Pro	Met	Asn	Ile	Asp	Arg						
		675					680					685									
Asn	Ile	Thr	His	Leu	Gln	Tyr	Cys	Val	Cys	Ile	Asp	Asp	Cys	Ser	Ser						
	690				695						700										
Ser	Asn	Cys	Met	Cys	Gly	Gln	Leu	Ser	Met	Arg	Cys	Trp	Tyr	Asp	Lys						
705					710					715					720						
Asp	Gly	Arg	Leu	Leu	Pro	Glu	Phe	Asn	Met	Ala	Glu	Pro	Pro	Leu	Ile						
			725					730						735							
Phe	Glu	Cys	Asn	His	Ala	Cys	Ser	Cys	Trp	Arg	Asn	Cys	Arg	Asn	Arg						
			740				745					750									
Val	Val	Gln	Asn	Gly	Leu	Arg	Ala	Arg	Leu	Gln	Leu	Tyr	Arg	Thr	Arg						
		755				760					765										
Asp	Met	Gly	Trp	Gly	Val	Arg	Ser	Leu	Gln	Asp	Ile	Pro	Pro	Gly	Thr						

930                      935                      940  
 Gly Pro Pro Arg Arg Arg Leu Glu Asp Glu Glu Glu Arg Phe Arg Thr  
 945                      950                      955                      960  
 Gln Pro Lys Gly Ser Phe Gly Ala Ala Pro Pro Ala Ser Trp Arg Gly  
                     965                      970                      975  
 Arg Arg

<210> 4105

<211> 775

<212> DNA

<213> Homo sapiens

<400> 4105

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 120  
 ctgatcgacg gcggggagca ttactgggag gtgcgctacg agccggacag caaggcgttc  
 180  
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<210> 4106

<211> 186

<212> PRT

<213> Homo sapiens

<400> 4106

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 Ser Tyr Thr Val Leu Gly Asp Thr Leu Ile Asp Gly Gly Glu His Tyr  
                     35                      40                      45  
 Trp Glu Val Arg Tyr Glu Pro Asp Ser Lys Ala Phe Gly Val Gly Val

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Ala Tyr Arg Ser Leu Gly Arg Phe Glu Gln Leu Gly Lys Thr Ala Ala		
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Ser Trp Cys Leu His Ser Thr Ile Gly Cys Arg Ser Ala Ser Arg Lys		80
	85	90
His Ala Asn Lys Val Lys Val Leu Asp Ala Pro Val Pro Asp Cys Leu		95
	100	105
Gly Val His Cys Asp Phe His Gln Gly Leu Leu Ser Phe Tyr Asn Ala		110
	115	120
Arg Thr Lys Gln Val Leu His Thr Phe Lys Thr Arg Phe Thr Gln Pro		125
	130	135
Leu Leu Pro Ala Phe Thr Val Trp Cys Gly Ser Phe Gln Val Thr Thr		140
145	150	155
Gly Leu Gln Val Pro Ser Ala Val Arg Cys Leu Gln Lys Arg Gly Ser		160
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Ala Thr Ser Ser Ser Asn Thr Ser Leu Thr		175
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&lt;210&gt; 4107

&lt;211&gt; 1442

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4107

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&lt;210&gt; 4108

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4108

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		20						25					30		
Val	Gln	Leu	Asp	Ala	Gln	Ala	Pro	Ser	Ser	Cys	Ser	Thr	Glu	Ala	Gln
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Gly	Thr	Val	Gly	Arg	Leu	Asn	Ile	Thr	Val	Val	Gln	Ala	Lys	Leu	Ala
	50					55					60				
Lys	Asn	Tyr	Gly	Met	Thr	Arg	Met	Asp	Pro	Tyr	Cys	Arg	Leu	Arg	Leu
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Gly	Tyr	Ala	Val	Tyr	Glu	Thr	Pro	Thr	Ala	His	Asn	Gly	Ala	Lys	Asn
				85					90					95	
Pro	Arg	Trp	Asn	Lys	Val	Ile	His	Cys	Thr	Val	Pro	Pro	Gly	Val	Asp
			100					105					110		
Ser	Phe	Tyr	Leu	Glu	Ile	Phe	Asp	Glu	Arg	Ala	Phe	Ser	Met	Asp	Asp
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Arg	Ile	Ala	Trp	Thr	His	Ile	Thr	Ile	Pro	Glu	Ser	Leu	Arg	Gln	Gly
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Lys	Val	Glu	Asp	Lys	Trp	Tyr	Ser	Leu	Ser	Gly	Arg	Gln	Gly	Asp	Asp
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Lys	Glu	Gly	Met	Ile	Asn	Leu	Val	Met	Ser	Tyr	Ala	Leu	Leu	Pro	Ala
				165					170					175	
Ala	Met	Val	Met	Pro	Pro	Gln	Pro	Val	Val	Leu	Met	Pro	Thr	Val	Tyr
			180					185						190	
Gln	Gln	Gly	Val	Gly	Tyr	Val	Pro	Ile	Thr	Gly	Met	Pro	Ala	Val	Cys
		195					200					205			
Ser	Pro	Gly	Met	Val	Pro	Val	Ala	Leu	Pro	Pro	Ala	Ala	Val	Asn	Ala

210	215	220	
Gln Pro Arg Cys Ser Glu Glu Asp Leu Lys Ala Ile Gln Asp Met Phe			
225	230	235	240
Pro Asn Met Asp Gln Glu Val Ile Arg Ser Val Leu Glu Ala Gln Arg			
	245	250	255
Gly Asn Lys Asp Ala Ala Ile Asn Ser Leu Leu Gln Met Gly Glu Glu			
	260	265	270
Pro			

&lt;210&gt; 4109

&lt;211&gt; 1637

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4109

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<211> 375

<212> PRT

<213> Homo sapiens

<400> 4110

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			20					25					30		
Pro	Ile	Phe	Ser	Leu	Ala	Thr	Pro	Leu	Arg	Ala	Gly	Glu	Glu	Gly	Ser
		35				40					45				
His	Ser	Arg	Lys	Ser	Leu	Cys	Arg	Ser	Arg	Glu	Glu	Leu	Arg	Gly	Lys
		50				55				60					
Val	Arg	Glu	Leu	Ala	Ser	Ala	Val	Arg	Asn	Ala	Lys	Tyr	Leu	Val	Val
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Tyr	Thr	Gly	Ala	Gly	Ile	Ser	Thr	Ala	Ala	Ser	Ile	Pro	Asp	Tyr	Arg
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Ala	Ala	Asp	Leu	Ser	Glu	Ala	Glu	Pro	Thr	Leu	Thr	His	Met	Ser	Ile
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His	Arg	His	Gln	Thr	Gly	Arg	Thr	Cys	His	Lys	Cys	Gly	Thr	Gln	Leu
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Arg	Asp	Thr	Ile	Val	His	Phe	Gly	Glu	Arg	Gly	Thr	Leu	Gly	Gln	Pro
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Trp	Cys	Met	Thr	Lys	Pro	Pro	Ala	Gly	Gly	Arg	Leu	Tyr	Ile	Val	Asn
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Leu	Gln	Trp	Thr	Pro	Lys	Asp	Asp	Trp	Ala	Ala	Leu	Lys	Leu	His	Gly
		275					280					285			
Lys	Cys	Asp	Asp	Val	Met	Arg	Leu	Leu	Met	Ala	Glu	Leu	Gly	Leu	Glu
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Pro	Leu	Arg	Ala	Gly	Glu	Glu	Gly	Ser	His	Ser	Arg	Lys	Ser	Leu	Cys
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Arg	Ser	Arg	Glu	Glu	Ala	Pro	Pro	Gly	Asp	Arg	Gly	Ala	Pro	Leu	Ser
			340					345					350		
Ser	Ala	Pro	Ile	Leu	Gly	Gly	Trp	Phe	Gly	Arg	Gly	Cys	Thr	Lys	Arg
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<212> DNA
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 Asp Thr Arg Arg Leu Ser Phe Leu Val Ser Tyr Ile Ala Ser Lys Lys  
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 85 90 95  
 His Pro Leu Asp Pro Ile Asp Thr Val Asp Phe Glu Arg Glu Cys Gly  
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 Val Gly Val Ile Val Thr Pro Glu Gln Ile Glu Glu Ala Val Glu Ala  
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 His Val Val Asp Ala Ala Leu Val Asp Cys Ser Val Ala Leu Ala Lys  
 725 730 735  
 Pro Phe Asp Lys Phe Gln Phe Glu Arg Leu Gly Tyr Phe Ser Val Asp  
 740 745 750  
 Pro Asp Ser His Gln Gly Lys Leu Val Phe Asn Arg Thr Val Thr Leu

755  
Lys Glu Asp Pro Gly Lys Val  
770 775

760

765

<210> 4113  
<211> 1894  
<212> DNA  
<213> Homo sapiens

<400> 4113  
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1320

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 1894

<210> 4114

<211> 389

<212> PRT

<213> Homo sapiens

<400> 4114

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			20					25					30		
Lys	Ala	Leu	Cys	Thr	Ala	His	Glu	Lys	Phe	Cys	Phe	Trp	Pro	Asp	Ser
			35				40					45			
Pro	Ser	Pro	Asp	Arg	Phe	Gly	Met	Leu	Pro	Leu	Asp	Glu	Pro	Ala	Ile
			50			55					60				
Leu	Val	Ser	Glu	Phe	Leu	Asp	Arg	Phe	Gln	Ser	Leu	Cys	His	Leu	Asp
65					70					75				80	
Leu	Gln	Leu	Pro	Ser	Leu	Arg	Pro	Glu	Asp	Leu	Lys	Thr	Met	Cys	Leu
				85				90						95	
Thr	Glu	Asp	Lys	Ile	Ser	Leu	Leu	Leu	His	Leu	Leu	Glu	Asp	Glu	Leu
			100					105					110		
Asp	His	Arg	Thr	Asp	Glu	Arg	Lys	Thr	Thr	Ile	Lys	Leu	Gly	Ser	Asp
			115				120					125			
Ile	Gln	Val	His	Val	Thr	Ala	Cys	Ile	Leu	Ser	Val	Cys	Gly	Trp	Ala
			130			135					140				
Cys	Ser	Ser	Ser	Leu	Glu	Ser	Met	Gln	Leu	Ser	Leu	Ile	Ala	Cys	Ser
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Gln	Cys	Met	Arg	Lys	Val	Gly	Leu	Trp	Gly	Phe	Gln	Gln	Ile	Glu	Ser
				165				170					175		
Ser	Met	Thr	Asp	Leu	Asp	Ala	Ser	Phe	Gly	Leu	Thr	Ser	Ser	Pro	Ile
			180				185					190			
Pro	Gly	Leu	Glu	Gly	Arg	Pro	Glu	Arg	Leu	Pro	Leu	Val	Pro	Glu	Ser
			195			200					205				
Pro	Arg	Arg	Met	Met	Thr	Arg	Ser	Gln	Asp	Ala	Thr	Phe	Ser	Pro	Gly

210                      215                      220  
 Ser Glu Gln Ala Glu Lys Ser Pro Gly Pro Ile Val Ser Arg Thr Arg  
 225                      230                      235                      240  
 Ser Trp Asp Ser Ser Ser Pro Val Asp Arg Pro Glu Pro Glu Ala Ala  
                          245                      250                      255  
 Ser Pro Thr Thr Arg Thr Arg Pro Val Thr Arg Ser Met Gly Thr Gly  
                          260                      265                      270  
 Asp Thr Pro Gly Leu Glu Val Pro Ser Ser Xaa Ser Ala Glu Ser Gln  
                          275                      280                      285  
 Ala Ser Ser Leu Cys Ser Ser Ser Ser Ser Asp Thr Ser Ser Arg Ser  
                          290                      295                      300  
 Phe Phe Asp Pro Thr Ser Gln His Arg Asp Trp Cys Pro Trp Val Asn  
 305                      310                      315                      320  
 Ile Thr Leu Gly Lys Glu Ser Arg Glu Asn Gly Gly Thr Glu Pro Asp  
                          325                      330                      335  
 Ala Ser Ala Pro Ala Glu Pro Gly Trp Lys Ala Val Leu Thr Ile Leu  
                          340                      345                      350  
 Leu Ala His Lys Gln Ser Ser Gln Pro Ala Glu Thr Asp Ser Met Ser  
                          355                      360                      365  
 Leu Ser Glu Lys Ser Arg Lys Val Phe Arg Ile Phe Arg Gln Trp Glu  
                          370                      375                      380  
 Ser Leu Cys Ser Cys  
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&lt;210&gt; 4115

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4115

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 180  
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 300  
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 360  
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 840  
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 900  
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 960  
 ccttttatca ttattcacac tcctctgccc tcgatttgca tgaagttgaa aattgttgcg  
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 1056

<210> 4116  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

<400> 4116  
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 Thr Ala Ser Pro Gly Glu Asn Lys Ser Pro Pro Arg Pro Cys Gly Leu  
 20 25 30  
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 35 40 45  
 Pro Thr Leu Gly Ser Ser Asn Asn Gln Leu Asn Ser Ser Leu Leu Gln  
 50 55 60  
 Val Tyr Ile Pro Asp Tyr Ser Val Arg Ala Leu Ser Asp Leu Gln Phe  
 65 70 75 80  
 Val Lys Ile Ser Arg Gln Gln Tyr Gln Asn Ala Leu Met Ala Ser Arg  
 85 90 95  
 Met Asp Lys Thr Pro Gln Ser Ser Asp Ser Glu Asn Thr Lys Ile Glu  
 100 105 110  
 Leu Thr Leu Thr Glu Leu His Asp Gly Leu Pro Asp Glu Thr Ala Asn  
 115 120 125  
 Leu Leu Asn Glu Gln Asn Cys Val Thr His Ser Lys Ala Asn His Ser  
 130 135 140  
 Leu His Asn Glu Gly Ala Ile  
 145 150

<210> 4117  
 <211> 973  
 <212> DNA  
 <213> Homo sapiens

<400> 4117  
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&lt;210&gt; 4118

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4118

Gly	Gly	Arg	Gln	Arg	Pro	Val	Ser	Gly	Tyr	Pro	Pro	Pro	Ser	His	Ala
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His	Leu	Gly	Pro	Gln	Ala	Gln	Pro	Ala	Val	Gln	Ala	His	Asp	Trp	Pro
		20					25						30		
Gly	Cys	Gly	Arg	Trp	Pro	Gln	Pro	Pro	Gly	Gly	Ile	Leu	Glu	Trp	Glu
		35				40						45			
Arg	Cys	Val	Gly	Cys	Pro	Arg	Pro	Ala	Arg	Pro	Ala	Ser	Pro	Ser	Pro
		50				55					60				
Gly	Glu	Ala	Thr	Pro	Pro	Pro	Ser	Ser	Gly	Ile	Ser	Ala	Val	Lys	Pro
65					70				75					80	
Pro	Leu	Arg	Ser	Pro	Arg	Thr	Leu	Pro	Leu	Glu	Leu	Gly	Thr	Gly	Gly
			85					90						95	
Cys	Val	Cys	Ala	Gly	Leu	Gly	Pro	Asn	Thr	Pro	Gly	Cys	Gln	Leu	His
			100				105						110		
Pro	Pro	Ala	Val	Leu	Cys	Pro	Gln	Gly	Leu	Gly	Arg	His	Gln	Arg	Leu
			115				120						125		

&lt;210&gt; 4119

&lt;211&gt; 649

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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649

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<210> 4120
<211> 100
<212> PRT
<213> Homo sapiens
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<400> 4120
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Met Leu Ser Leu Ser Ser Leu Pro Pro Trp Ala Val Thr Leu Leu Ala
              20              25              30
Cys Ile Leu Val Ser Ile Val Thr Glu Phe Val Ser Asn Pro Ala Thr
              35              40              45
Ile Thr Ile Phe Leu Pro Ile Leu Cys Ser Leu Val Ser Asn Ala Glu
              50              55              60
Leu Pro Asp Ile Gln Thr Gly Cys Pro Arg Gly Leu Trp Gln Ala
65              70              75              80
Trp Leu Arg Ala Ala Ser Val Ala Val Gly Ser Pro Leu Val Thr Ala
              85              90              95
His Ser Leu His
              100

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<210> 4121
<211> 2490
<212> DNA
<213> Homo sapiens
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 2280  
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 2340  
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<210> 4122

<211> 494

<212> PRT

<213> Homo sapiens

<400> 4122

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Phe	Gly	Leu	Gly	Leu	Gly	Leu	Ile	Glu	Glu	Lys	Gln	Ala	Glu	Ser	Arg
		20						25					30		
Arg	Ala	Val	Ser	Ala	Cys	Gln	Glu	Ile	Gln	Ala	Ile	Phe	Thr	Gln	Lys
		35				40						45			
Ser	Lys	Pro	Gly	Pro	Asp	Pro	Leu	Asp	Thr	Arg	Arg	Leu	Gln	Gly	Phe
	50					55					60				
Arg	Leu	Glu	Glu	Tyr	Leu	Ile	Gly	Gln	Ser	Ile	Gly	Lys	Gly	Cys	Ser
65					70				75					80	
Ala	Ala	Val	Tyr	Glu	Ala	Thr	Met	Pro	Thr	Leu	Pro	Gln	Asn	Leu	Glu
			85					90						95	
Val	Thr	Lys	Ser	Thr	Gly	Leu	Leu	Pro	Gly	Arg	Gly	Pro	Gly	Thr	Ser
			100					105					110		
Ala	Pro	Gly	Glu	Gly	Gln	Glu	Arg	Ala	Pro	Gly	Ala	Pro	Ala	Phe	Pro
		115				120					125				
Leu	Ala	Ile	Lys	Met	Met	Trp	Asn	Ile	Ser	Ala	Gly	Ser	Ser	Ser	Glu
	130					135					140				
Ala	Ile	Leu	Asn	Thr	Met	Ser	Gln	Glu	Leu	Val	Pro	Ala	Ser	Arg	Val

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 Ala Leu Ala Gly Glu Tyr Gly Ala Val Thr Tyr Arg Lys Ser Lys Arg  
                                  165                      170                      175  
 Gly Pro Lys Gln Leu Ala Pro His Pro Asn Ile Ile Arg Val Leu Arg  
                                  180                      185                      190  
 Ala Phe Thr Ser Ser Val Pro Leu Leu Pro Gly Ala Leu Val Asp Tyr  
                                  195                      200                      205  
 Pro Asp Val Leu Pro Ser Arg Leu His Pro Glu Gly Leu Gly His Gly  
                                  210                      215                      220  
 Arg Thr Leu Phe Leu Val Met Lys Asn Tyr Pro Cys Thr Leu Arg Gln  
 225                      230                      235                      240  
 Tyr Leu Cys Val Asn Thr Pro Ser Pro Arg Leu Ala Ala Met Met Leu  
                                  245                      250                      255  
 Leu Gln Leu Leu Glu Gly Val Asp His Leu Val Gln Gln Gly Ile Ala  
                                  260                      265                      270  
 His Arg Asp Leu Lys Ser Asp Asn Ile Leu Val Glu Leu Asp Pro Asp  
                                  275                      280                      285  
 Gly Cys Pro Trp Leu Val Ile Ala Asp Phe Gly Cys Cys Leu Ala Asp  
                                  290                      295                      300  
 Glu Ser Ile Gly Leu Gln Leu Pro Phe Ser Ser Trp Tyr Val Asp Arg  
 305                      310                      315                      320  
 Gly Gly Asn Gly Cys Leu Met Ala Pro Glu Val Ser Thr Ala Arg Pro  
                                  325                      330                      335  
 Gly Pro Arg Ala Val Ile Asp Tyr Ser Lys Ala Asp Ala Trp Ala Val  
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&lt;211&gt; 1095

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4123

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&lt;210&gt; 4124

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4124

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<211> 820

<212> PRT

<213> Homo sapiens

<400> 4126

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&lt;210&gt; 4127

&lt;211&gt; 2189

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&lt;400&gt; 4127

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 caaccttagc ccctcagaac agggagtccc aggaccagg gagagtgtgg ggacaggaca  
 1980  
 gcctgtctct ttagcttcc tgggggtggga ggcacagggg caaagcaata cccagggaa  
 2040  
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 2100  
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 2160  
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 2189

&lt;210&gt; 4128

&lt;211&gt; 445

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4128

Pro	Cys	Phe	Leu	Pro	Ser	Ala	Thr	Ser	Lys	Leu	Ser	Gly	Ala	Val	Glu
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Gln	Trp	Leu	Ser	Ala	Ala	Glu	Arg	Leu	Tyr	Gly	Pro	Tyr	Met	Trp	Gly
		20						25				30			
Arg	Tyr	Asp	Ile	Val	Phe	Leu	Pro	Pro	Ser	Phe	Pro	Ile	Val	Ala	Met
	35						40					45			
Glu	Asn	Pro	Cys	Leu	Thr	Phe	Ile	Ile	Ser	Ser	Ile	Leu	Glu	Ser	Asp

50		55		60
Glu Phe Leu Val Ile Asp Val Ile His Glu Val Ala His Ser Trp Phe				
65	70	75	80	
Gly Asn Ala Val Thr Asn Ala Thr Trp Glu Glu Met Trp Leu Ser Glu				
	85	90	95	
Gly Leu Ala Thr Tyr Ala Gln Arg Arg Ile Thr Thr Glu Thr Tyr Gly				
	100	105	110	
Ala Ala Phe Thr Cys Leu Glu Thr Ala Phe Arg Leu Asp Ala Leu His				
	115	120	125	
Arg Gln Met Lys Leu Leu Gly Glu Asp Ser Pro Val Ser Lys Leu Gln				
	130	135	140	
Val Lys Leu Glu Pro Gly Val Asn Pro Ser His Leu Met Asn Leu Phe				
145	150	155	160	
Thr Tyr Glu Lys Gly Tyr Cys Phe Val Tyr Tyr Leu Ser Gln Leu Cys				
	165	170	175	
Gly Asp Pro Gln Arg Phe Asp Asp Phe Leu Arg Ala Tyr Val Glu Lys				
	180	185	190	
Tyr Lys Phe Thr Ser Val Val Ala Gln Asp Leu Leu Asp Ser Phe Leu				
	195	200	205	
Ser Phe Phe Pro Glu Leu Lys Glu Gln Ser Val Asp Cys Arg Ala Gly				
	210	215	220	
Leu Glu Phe Glu Arg Trp Leu Asn Ala Thr Gly Pro Pro Leu Ala Glu				
225	230	235	240	
Pro Asp Leu Ser Gln Gly Ser Ser Leu Thr Arg Pro Val Glu Ala Leu				
	245	250	255	
Phe Gln Leu Trp Thr Ala Glu Pro Leu Asp Gln Ala Ala Ser Ala				
	260	265	270	
Ser Ala Ile Asp Ile Ser Lys Trp Arg Thr Phe Gln Thr Ala Leu Phe				
	275	280	285	
Leu Asp Arg Leu Leu Asp Gly Ser Pro Leu Pro Gln Glu Val Val Met				
	290	295	300	
Ser Leu Ser Lys Cys Tyr Ser Ser Leu Leu Asp Ser Met Asn Ala Glu				
305	310	315	320	
Ile Arg Ile Arg Trp Leu Gln Ile Val Val Arg Asn Asp Tyr Tyr Pro				
	325	330	335	
Asp Leu His Arg Val Arg Arg Phe Leu Glu Ser Gln Met Ser Arg Met				
	340	345	350	
Tyr Thr Ile Pro Leu Tyr Glu Asp Leu Cys Thr Gly Ala Leu Lys Ser				
	355	360	365	
Phe Ala Leu Glu Val Phe Tyr Gln Thr Gln Gly Arg Leu His Pro Asn				
	370	375	380	
Leu Arg Arg Ala Ile Gln Gln Ile Leu Ser Gln Gly Leu Gly Ser Ser				
385	390	395	400	
Thr Glu Pro Ala Ser Glu Pro Ser Thr Glu Leu Gly Lys Ala Glu Ala				
	405	410	415	
Asp Thr Asp Ser Asp Ala Gln Ala Leu Leu Leu Gly Asp Glu Ala Pro				
	420	425	430	
Ser Ser Ala Ile Ser Leu Arg Asp Val Asn Val Ser Ala				
	435	440	445	

&lt;210&gt; 4129

&lt;211&gt; 1749

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 180  
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 240  
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 780  
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 tccatcaaaa tgaacaacaa gcccttgttt ctgcaccacg tgatcatgca cggcatcccc  
 960  
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 1380  
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 1749

<210> 4130

<211> 523

<212> PRT

<213> Homo sapiens

<400> 4130

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Ser	Asn	His	Glu	Leu	Val	Pro	Ile	Thr	Thr	Glu	Asn	Ala	Pro	Glu	Asn
			20					25					30		
Val	Val	Asp	Gln	Gly	Ala	Gly	Ala	Ser	Arg	Gly	Gly	Asn	Thr	Arg	Lys
		35					40					45			
Ser	Leu	Glu	Asp	Asn	Gly	Ser	Thr	Arg	Val	Thr	Pro	Ser	Val	Gln	Pro
	50				55						60				
His	Leu	Gln	Pro	Ile	Arg	Asn	Met	Ser	Val	Ser	Arg	Thr	Met	Glu	Asp
65					70					75				80	
Ser	Cys	Glu	Leu	Asp	Leu	Val	Tyr	Val	Thr	Glu	Arg	Ile	Ile	Ala	Val
				85					90					95	
Ser	Phe	Pro	Ser	Thr	Ala	Asn	Glu	Glu	Asn	Phe	Arg	Ser	Asn	Leu	Arg
			100					105					110		
Glu	Val	Ala	Gln	Met	Leu	Lys	Ser	Lys	His	Gly	Gly	Asn	Tyr	Leu	Leu
		115					120					125			
Phe	Asn	Leu	Ser	Glu	Arg	Arg	Pro	Asp	Ile	Thr	Lys	Leu	His	Ala	Lys
	130					135					140				
Val	Leu	Glu	Phe	Gly	Trp	Pro	Asp	Leu	His	Thr	Pro	Ala	Leu	Glu	Lys
145					150					155				160	
Ile	Cys	Ser	Ile	Cys	Lys	Ala	Met	Asp	Thr	Trp	Leu	Asn	Ala	Asp	Pro
			165					170						175	
His	Asn	Val	Val	Val	Leu	His	Asn	Lys	Gly	Asn	Arg	Gly	Arg	Ile	Gly
		180						185					190		
Val	Val	Ile	Ala	Ala	Tyr	Met	His	Tyr	Ser	Asn	Ile	Ser	Ala	Ser	Ala
	195						200					205			
Asp	Gln	Ala	Leu	Asp	Arg	Phe	Ala	Met	Lys	Arg	Phe	Tyr	Glu	Asp	Lys
	210					215					220				
Ile	Val	Pro	Ile	Gly	Gln	Pro	Ser	Gln	Arg	Arg	Tyr	Val	His	Tyr	Phe
225					230					235				240	
Ser	Gly	Leu	Leu	Ser	Gly	Ser	Ile	Lys	Met	Asn	Asn	Lys	Pro	Leu	Phe
			245					250					255		
Leu	His	His	Val	Ile	Met	His	Gly	Ile	Pro	Asn	Phe	Glu	Ser	Lys	Gly
		260					265						270		
Gly	Cys	Arg	Pro	Phe	Leu	Arg	Ile	Tyr	Gln	Ala	Met	Gln	Pro	Val	Tyr
	275					280						285			
Thr	Ser	Gly	Ile	Tyr	Asn	Ile	Pro	Gly	Asp	Ser	Gln	Thr	Ser	Val	Cys
	290				295						300				
Ile	Thr	Ile	Glu	Pro	Gly	Leu	Leu	Leu	Lys	Gly	Asp	Ile	Leu	Leu	Lys

[illegible]

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<210> 4131
<211> 608
<212> DNA
<213> Homo sapiens
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120
aaaggcctga gacccgttta tgaagagctc gactctgact ccgaggacct agaccccaat
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cctgaagatc tggacccggg ttctgaagac ccagagcctg atcctgaaga cctcaacact
240
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300
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360
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420
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480
aggtcttggc caccagcccc gcggtgctcc ccgccccgc cagcccgccc cggcccttct
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<211> 194  
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<213> Homo sapiens

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Val Leu Val Arg Asn Pro Gly His Lys Gly Leu Arg Pro Val Tyr Glu  
35 40 45  
Glu Leu Asp Ser Asp Ser Glu Asp Leu Asp Pro Asn Pro Glu Asp Leu  
50 55 60  
Asp Pro Val Ser Glu Asp Pro Glu Pro Asp Pro Glu Asp Leu Asn Thr  
65 70 75 80  
Val Pro Glu Asp Val Asp Pro Ser Tyr Glu Asp Leu Glu Pro Val Ser  
85 90 95  
Glu Asp Leu Asp Pro Asp Ala Glu Ala Pro Gly Ser Glu Pro Gln Asp  
100 105 110  
Pro Asp Pro Met Ser Ser Ser Phe Asp Leu Asp Pro Asp Val Ile Gly  
115 120 125  
Pro Val Pro Leu Ile Leu Asp Pro Asn Ser Asp Thr Leu Ser Pro Gly  
130 135 140  
Asp Pro Lys Val Asp Pro Xaa Ser Pro Leu Ala Ser Leu Arg Ala Pro  
145 150 155 160  
Arg Ser Trp Pro Pro Ala Pro Arg Cys Ser Pro Pro Pro Pro Ala Arg  
165 170 175  
Pro Gly Pro Ser Pro Ala Arg Ile Ala Ala Lys Pro Ser Ala Ala Ala  
180 185 190  
Pro Gly

<210> 4133  
<211> 1646  
<212> DNA  
<213> Homo sapiens

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120  
gaaatgggct gggagacaca gaaaatgggt gcccacagtt cctgggatcc ctcttggaat  
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240  
accccgagg tcccaaggaa ccagtttga gaaccaaggc tttaggccaa ggacttcctt  
300  
gcacaagaag gtgcagatgt acagggatgg ttcagacagt ggcctcaacc tcaatggctt  
360



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 1646

&lt;210&gt; 4134

&lt;211&gt; 329

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4134

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 Gly Ala Glu Asp Arg Ala Val Gly Ala Gln Ala Ser Val Gly Ser Arg  
 35 40 45  
 Ser Glu Gly Glu Gly Glu Ala Ala Ser Ala Asp Asp Gly Ser Leu Asn  
 50 55 60  
 Thr Ser Gly Ala Gly Pro Lys Ser Trp Gln Val Pro Pro Pro Ala Pro  
 65 70 75 80  
 Glu Val Gln Ile Arg Thr Pro Arg Val Asn Cys Pro Glu Lys Val Ile  
 85 90 95  
 Ile Cys Leu Asp Leu Ser Glu Glu Met Ser Leu Pro Lys Leu Glu Ser  
 100 105 110  
 Phe Asn Gly Ser Lys Thr Asn Ala Leu Asn Val Ser Gln Lys Met Ile  
 115 120 125  
 Glu Met Phe Val Arg Thr Lys His Lys Ile Asp Lys Ser His Glu Phe  
 130 135 140  
 Ala Leu Val Val Val Asn Asp Asp Thr Ala Trp Leu Ser Gly Leu Thr  
 145 150 155 160  
 Ser Asp Pro Arg Glu Leu Cys Ser Cys Leu Tyr Asp Leu Glu Thr Ala  
 165 170 175  
 Ser Cys Ser Thr Phe Asn Leu Glu Gly Leu Phe Ser Leu Ile Gln Gln  
 180 185 190  
 Lys Thr Glu Leu Pro Val Thr Glu Asn Val Gln Thr Ile Pro Pro Pro  
 195 200 205  
 Tyr Val Val Arg Thr Ile Leu Val Tyr Ser Arg Pro Pro Cys Gln Pro  
 210 215 220  
 Gln Phe Ser Leu Thr Glu Pro Met Lys Lys Met Phe Gln Cys Pro Tyr  
 225 230 235 240  
 Phe Phe Phe Asp Val Tyr Ile His Asn Gly Thr Glu Glu Lys Glu  
 245 250 255  
 Glu Glu Met Ser Trp Lys Asp Met Phe Ala Phe Met Gly Ser Leu Asp  
 260 265 270  
 Thr Lys Gly Thr Ser Tyr Lys Tyr Glu Val Ala Leu Ala Gly Pro Ala  
 275 280 285  
 Leu Glu Leu His Asn Cys Met Ala Lys Leu Leu Ala His Pro Leu Gln  
 290 295 300  
 Arg Pro Cys Gln Ser His Ala Ser Tyr Ser Leu Leu Glu Glu Glu Asp  
 305 310 315 320  
 Glu Ala Ile Glu Val Glu Ala Thr Val  
 325

&lt;210&gt; 4135

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4135

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<210> 4136  
 <211> 123  
 <212> PRT  
 <213> Homo sapiens

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 Ser Leu Leu Pro Leu Leu Glu Lys Leu Thr Thr Gly Arg Ile Ala Glu  
 35 40 45  
 Leu Leu Ser Pro Asp Tyr Met Asp Leu Glu Asp Pro Arg Pro Ile Phe  
 50 55 60  
 Asp Trp Met Gln Ile Ile Arg Lys Arg Ala Val Val Tyr Val Gly Leu  
 65 70 75 80  
 Asp Ala Leu Ser Asp Thr Glu Val Ala Ala Ala Val Gly Asn Ser Met  
 85 90 95  
 Phe Ser Asp Leu Val Ser Val Ala Gly His Ile Tyr Lys Phe Gly Ile  
 100 105 110  
 Asp Asp Gly Leu Pro Gly Ala Thr Gly Gly Lys  
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<210> 4137  
 <211> 2255  
 <212> DNA  
 <213> Homo sapiens

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1140  
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gcccatccag gctgctccct ggggtggaga agggaccagg gattgcaggc cccatctcca  
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<400> 4138  
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 Val Ser Leu Gly His Leu Glu Ser Ala Arg Val Leu Leu Arg His Lys  
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 Ala Asp Val Thr Lys Glu Asn Arg Gln Gly Trp Thr Val Leu His Glu  
 65 70 75 80  
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 85 90 95  
 Arg Asp Tyr His Asn Thr Ser Met Ala Leu Glu Gly Val Pro Glu Leu  
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 Glu Phe Thr Ser Trp Val Pro Leu Val Ser Arg Ile Cys Pro Asn Asp  
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 Val Cys Arg Ile Trp Lys Ser Gly Ala Lys Leu Arg Val Asp Ile Thr  
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 195 200 205  
 Glu Arg Leu Thr Leu Asp Leu Met Lys Pro Lys Ser Arg Glu Val Glu  
 210 215 220  
 Arg Arg Leu Thr Ser Pro Val Ile Asn Thr Ser Leu Asp Thr Lys Asn  
 225 230 235 240  
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 Lys Ala Glu Val Val Asn Gly Tyr Glu Ala Lys Val Tyr Thr Val Asn  
 260 265 270  
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 275 280 285  
 Glu Lys Lys Arg Tyr Lys Ala Asp Arg Asn Pro Leu Glu Ser Leu Leu  
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 Gly Thr Val Glu His Gln Phe Gly Ala Gln Gly Asp Leu Thr Thr Glu  
 305 310 315 320  
 Cys Ala Thr Ala Asn Asn Pro Thr Ala Ile Thr Pro Asp Glu Tyr Phe  
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&lt;210&gt; 4142

&lt;211&gt; 311

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4142

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			20						25				30		
Ser	Arg	Val	His	Ile	Tyr	His	His	Thr	Gly	Asn	Asn	Thr	Phe	Arg	Val
			35				40					45			
Val	Gly	Arg	Lys	Ile	Gln	Asp	His	Gln	Val	Val	Ile	Asn	Cys	Ala	Ile
			50			55					60				
Pro	Lys	Gly	Leu	Lys	Tyr	Asn	Gln	Ala	Thr	Gln	Thr	Phe	His	Gln	Trp
			65		70				75					80	
Arg	Asp	Ala	Arg	Gln	Val	Tyr	Gly	Leu	Asn	Phe	Gly	Ser	Lys	Glu	Asp
			85					90						95	
Ala	Asn	Val	Phe	Ala	Ser	Ala	Met	Met	His	Ala	Leu	Glu	Val	Leu	Asn

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Ser	Gln	Glu	Thr	Gly	Pro	Thr	Leu	Pro	Arg	Gln	Asn	Ser	Gln	Leu	Pro
	115						120					125			
Ala	Gln	Val	Gln	Asn	Gly	Pro	Ser	Gln	Glu	Glu	Leu	Glu	Ile	Gln	Arg
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			165						170				175		
Glu	Arg	Glu	Arg	Leu	Glu	Arg	Glu	Arg	Leu	Glu	Gln	Glu	Gln	Leu	Glu
	180							185					190		
Arg	Glu	Arg	Gln	Glu	Arg	Glu	Arg	Gln	Glu	Arg	Leu	Glu	Arg	Gln	Glu
	195						200					205			
Arg	Leu	Glu	Arg	Gln	Glu	Arg	Leu	Glu	Arg	Gln	Glu	Arg	Leu	Asp	Arg
	210					215					220				
Glu	Arg	Glu	Arg	Gln	Glu	Arg	Glu	Arg	Leu	Glu	Arg	Leu	Glu	Arg	Glu
225				230					235					240	
Arg	Gln	Glu	Arg	Glu	Arg	Gln	Glu	Gln	Leu	Glu	Arg	Glu	Gln	Leu	Glu
			245					250					255		
Trp	Glu	Arg	Glu	Arg	Arg	Ile	Ser	Ser	Ala	Ala	Ala	Pro	Ala	Ser	Val
	260							265					270		
Glu	Thr	Pro	Leu	Asn	Ser	Val	Leu	Gly	Asp	Ser	Ser	Ala	Ser	Glu	Pro
	275						280					285			
Gly	Leu	Gln	Ala	Ala	Ser	Gln	Pro	Ala	Glu	Thr	Pro	Ser	Gln	Gln	Gly
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Ile	Val	Leu	Gly	Pro	Leu	Ala									
305					310										

&lt;210&gt; 4143

&lt;211&gt; 1773

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4143

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420

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<210> 4144

<211> 231

<212> PRT

<213> Homo sapiens

<400> 4144

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Arg	Gly	Cys	Trp	Val	Asn	Gly	Ile	Arg	Arg	Leu	Ile	Val	Ser	Arg	Arg
		20					25					30			
Gly	Asp	Glu	Glu	Glu	Phe	Phe	Glu	Ile	Arg	Thr	Glu	Trp	Ser	Asp	Arg
	35					40					45				
Ser	Val	Leu	Tyr	Leu	His	Arg	Ser	Leu	Ala	Asp	Leu	Gly	Arg	Leu	Trp

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Gln Arg Leu Arg Asp	Ala Phe Pro Glu Asp Arg	Ser Glu Leu Ala Gln		
65	70	75	80	
Gly Pro Leu Arg Gln	Gly Leu Val Ala Ile Lys	Glu Ala His Asp Ile		
	85	90	95	
Glu Thr Arg Leu Asn	Glu Val Glu Lys Leu Leu Lys	Thr Ile Ile Ser		
	100	105	110	
Met Pro Cys Lys Tyr	Ser Arg Ser Glu Val Val	Leu Thr Phe Phe Glu		
	115	120	125	
Arg Ser Pro Leu Asp	Gln Val Leu Lys Asn Asp	Asn Val His Lys Ile		
	130	135	140	
Gln Pro Ser Phe Gln	Ser Pro Val Lys Ile Ser	Glu Ile Met Arg Ser		
145	150	155	160	
Asn Gly Phe Cys Leu	Ala Asn Thr Glu Thr Ile	Val Ile Asp His Ser		
	165	170	175	
Ile Pro Asn Gly Arg	Asp Gln Gln Leu Gly Val	Asp Pro Thr Glu His		
	180	185	190	
Leu Phe Glu Asn Gly	Ser Glu Phe Pro Ser Glu	Leu Glu Asp Gly Asp		
	195	200	205	
Asp Pro Ala Ala Tyr	Val Thr Asn Leu Ser Tyr	Tyr His Leu Val Pro		
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225	230			

&lt;210&gt; 4145

&lt;211&gt; 400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4145

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400

&lt;210&gt; 4146

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4146

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Glu Pro Asp Lys Thr	Pro Ala Ala Thr	Val Thr Asn Glu	Ala Ser Cys

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 Trp Ser Gly Pro Ser Pro Glu Gly Pro Val Pro Leu Thr Gly Glu Glu  
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 50 55 60  
 Glu Tyr Ala Lys Thr Trp Ser Arg Tyr Ala Lys Glu Leu Leu Ala Trp  
 65 70 75 80  
 Thr Glu Lys Arg Ala Ser Tyr Glu Leu Glu Phe Ala Lys Ser Thr Met  
 85 90 95  
 Lys Ile Ala Glu Ala Gly Lys Val Ser Ile Gln Gln Gln Ser His Met  
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 Pro Leu Gln Tyr Ile Tyr Thr Leu Phe Leu Glu His Asp Leu Ser Leu  
 115 120 125  
 Gly Thr Leu Ala Met  
 130

&lt;210&gt; 4147

&lt;211&gt; 4892

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4147

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 <211> 697  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Glu Gln His Leu Phe Asp Val Asn Asn Ser Gly Gly Gln Ser Ser Glu  
 50 55 60  
 Asp Ser Glu Ser Gly Thr Leu Ser Ala Ser Ser Ala Thr Ser Ala Arg  
 65 70 75 80  
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 85 90 95  
 Asp Lys Gly Leu Ile Asn Lys Glu Asn Thr Pro Ser Gly Phe Asn His  
 100 105 110  
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 115 120 125  
 Asn Thr Phe Gly Cys Ala Gly Glu Arg Ser Lys Pro Lys Arg Gln Lys  
 130 135 140  
 Ser Ser Thr Lys Leu Ser Glu Leu His Asp Asn Gln Asp Gly Leu Val  
 145 150 155 160  
 Asn Met Glu Ser Leu Asn Ser Thr Arg Ser His Glu Arg Thr Gly Pro  
 165 170 175  
 Asp Asp Phe Glu Trp Met Ser Asp Glu Arg Lys Gly Asn Glu Lys Asp

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His	Pro	Ser	Leu	Ser	Asp	Thr	Lys	Gln	Gln	Arg	Asn	Gln	Asp	Ala	Gly								
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Asp	Gln	Glu	Glu	Ser	Phe	Val	Ser	Glu	Val	Pro	Gln	Ser	Asp	Leu	Thr								
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Ala	Leu	Cys	Asp	Glu	Lys	Asn	Trp	Glu	Glu	Pro	Ile	Pro	Ala	Phe	Ser								
Ser	Trp	Gln	Arg	Glu	Asn	Ser	Asp	Ser	Asp	Glu	Ala	His	Leu	Ser	Pro								
Gln	Ala	Gly	Arg	Leu	Ile	Arg	Gln	Leu	Leu	Asp	Glu	Asp	Ser	Asp	Pro								
Met	Leu	Ser	Pro	Arg	Phe	Tyr	Ala	Tyr	Gly	Gln	Ser	Arg	Gln	Tyr	Leu								
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465																							
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Val	Thr	Lys	Asn	Glu	Arg	Gln	Val	Met	Lys	Pro	Leu	Tyr	Asp	Arg	Tyr								
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Gly	Ser	Pro	Ser	Ser	Lys	Arg	Arg	Ser	Pro	Leu	Leu												

610	615	620
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Lys Lys Leu Arg Asp Phe Glu Asp Asn Phe Phe Arg Gln Asn Gly Arg		640
	645	650
Asn Val Gln Lys Glu Asp Arg Thr Pro Met Ala Glu Glu Tyr Ser Glu		655
	660	665
Tyr Lys His Ile Lys Ala Lys Leu Arg Leu Leu Glu Val Leu Ile Ser		670
	675	680
Lys Arg Asp Thr Asp Ser Lys Ser Met		685
690	695	

&lt;210&gt; 4149

&lt;211&gt; 1396

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4149

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 720  
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 <212> PRT  
 <213> Homo sapiens

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 His Ile Lys Arg Ile Thr Asp Asn Asp Ile Gln Ser Leu Val Leu Glu  
 35 40 45  
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 50 55 60  
 Pro Lys Lys Thr Leu Gly Ile Lys Leu Pro Phe Leu Val Met Ile Ile  
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 Lys Asn Leu Lys Lys Tyr Phe Thr Phe Glu Val Gln Val Leu Asp Asp  
 85 90 95  
 Lys Asn Val Arg Arg Arg Phe Arg Ala Ser Asn Tyr Gln Ser Thr Thr  
 100 105 110  
 Arg Val Lys Pro Phe Ile Cys Thr Met Pro Met Arg Leu Asp Asp Gly  
 115 120 125  
 Trp Asn Gln Ile Gln Phe Asn Leu Leu Asp Phe Thr Arg Arg Ala Tyr  
 130 135 140  
 Gly Thr Asn Tyr Ile Glu Thr Leu Arg Val Gln Ile His Ala Asn Cys  
 145 150 155 160  
 Arg Ile Arg Arg Val Tyr Phe Ser Asp Arg Leu Tyr Ser Glu Asp Glu  
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 Gln

<210> 4151  
 <211> 1372  
 <212> DNA  
 <213> Homo sapiens

<400> 4151  
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 1320  
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 1372

&lt;210&gt; 4152

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4152

Met Pro Cys Thr Ala Ser Trp Pro Gln Gly Leu Leu Arg Trp Trp Glu  
 1 5 10 15  
 Gly Cys Pro Ala Val Arg Lys Ala Ser Ala Gly Ala Ala Ala Val

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      35      40      45
Ser Glu Pro Ala Ser Val Ala Pro Asn Gln Asn Leu Leu Cys Ala Pro
      50      55      60
Arg Pro Pro Ser Thr Phe Met Ser Val Leu Leu Leu Arg Gly Gln Val
65      70      75      80
Leu Pro Ser Leu Thr Ala Leu Ala Arg Pro Ala Arg Phe Pro Ser Asn
      85      90      95
Pro

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&lt;210&gt; 4153

&lt;211&gt; 395

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4153

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tcattaattc ttccacttta tcatttacat ctaggtcctc ttctgaggct tcaaaactgt
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240
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300
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395

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&lt;210&gt; 4154

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4154

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Met Ser Pro Ser Pro Ser Asn Ser Tyr Asp Thr Ser Pro Gln Pro Cys
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Thr Thr Asn Gln Asn Gly Arg Glu Asn Asn Glu Arg Leu Ser Thr Ser
      20      25      30
Asn Gly Lys Met Ser Pro Thr Arg Phe His Ala Asn Ser Met Gly Gln
      35      40      45
Arg Ser Tyr Ser Phe Glu Ala Ser Glu Glu Asp Leu Asp Val Asn Asp
      50      55      60
Lys Val Glu Glu Leu Met Arg Arg Asp Ser Ser Val Ile Lys Glu Glu
65      70      75      80
Ile Lys Ala Phe Leu Ala Asn Arg Arg Ile Ser Gln Ala Val Asp Thr
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Ile Gly Lys Met Leu Phe Pro Ser Val His Ser Gly Leu Ile
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<210> 4155  
<211> 1191  
<212> DNA  
<213> Homo sapiens

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720  
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<210> 4156  
<211> 233  
<212> PRT  
<213> Homo sapiens

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Asn Val Lys Asp Leu Arg Pro Arg Ala Arg Thr Ile Leu Lys Trp Asn			
35	40	45	
Glu Leu Asn Val Gly Asp Val Val Met Val Asn Tyr Asn Val Glu Ser			
50	55	60	
Pro Gly Gln Arg Gly Phe Trp Phe Asp Ala Glu Ile Thr Thr Leu Lys			
65	70	75	80
Thr Ile Ser Arg Thr Lys Lys Glu Leu Arg Val Lys Ile Phe Leu Gly			
85	90	95	
Gly Ser Glu Gly Thr Leu Asn Asp Cys Lys Ile Ile Ser Val Asp Glu			
100	105	110	
Ile Phe Lys Ile Glu Arg Pro Gly Ala His Pro Leu Ser Phe Ala Asp			
115	120	125	
Gly Lys Phe Leu Arg Arg Asn Asp Pro Glu Cys Asp Leu Cys Gly Gly			
130	135	140	
Asp Pro Glu Lys Lys Cys His Ser Cys Ser Cys Arg Val Cys Gly Gly			
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Lys His Glu Pro Asn Met Gln Leu Leu Cys Asp Glu Cys Asn Val Ala			
165	170	175	
Tyr His Ile Tyr Cys Leu Asn Pro Pro Leu Asp Lys Val Pro Glu Glu			
180	185	190	
Glu Tyr Trp Tyr Cys Pro Ser Cys Lys Thr Asp Ser Ser Glu Val Val			
195	200	205	
Lys Ala Gly Glu Arg Leu Lys Met Ser Lys Lys Lys Ala Lys Met Pro			
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Ser Ala Ser Thr Glu Ser Arg Arg Asp			
225	230		

&lt;210&gt; 4157

&lt;211&gt; 3460

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4157

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&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4158

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 <211> 1491  
 <212> DNA  
 <213> Homo sapiens

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<212> PRT

<213> Homo sapiens

<400> 4162

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Asn	Leu	Arg	Leu	Ala	Val	Arg	Ser	Gln	Leu	Gly	Phe	Thr	Ser	Val	Arg							
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Phe	Ala	Arg	Ser	Arg	His	Ser	Gly	Ser	Leu	Ala	Leu	Val	Ser	Ala	Asp							
										610				615				620				
Gly	Asp	Glu	Val	Val	Pro	Ser	Gln	Ser	Thr	Ser	Arg	Glu	Pro	Glu	Arg							
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Thr	Glu	Asn	Glu	Arg	Arg	Asp	Met	Ala	Gly	Ala	Ser	Gly	Gly	Val	Ala							
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Ala	Pro	Leu	Pro	Gln	Lys	Val	Pro	Pro	Thr	Thr	Ala	Val	Glu	Ala	Thr							

690		695		700
Ala Asp Asn Gly Arg Asp Val Thr Ser Val Glu Pro Pro Ser Val Ser				
705		710		715
Pro Ala Arg His Gln Leu Thr Ser Ala Leu Ser Arg Met Thr Gln Gly				
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Leu Arg Trp Val Arg Phe Thr Leu Gly Arg Ser Ser Ser Leu Ser Gln				
	740		745	750
Asn Gln Ser Pro Leu Arg Gln Leu Asp Asn Gly Val Ser Gly Arg Glu				
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Asp Asp Asp Asp Val Glu Met Leu Ile Pro Ile Ser Asp Gly Ser Ser				
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Asp Phe Asp Val Asn Asp Cys Ser Arg Pro Leu Asp Leu Ala Ser				
785		790		795
Asp Gln Gly Gln Gly Leu Arg Gln Pro Tyr Asn Ala Thr Asn Pro Gly				
	805		810	815
Val Arg Pro Ser Asn Arg Asp Gly Pro Cys Glu Arg Cys Gly Ile Val				
	820		825	830
His Thr Ala Gln Ile Pro Asp Thr Cys Leu Glu Val Thr Leu Lys Asn				
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Glu Thr Ser Asp Asp Glu Ala Leu Leu Leu Cys				
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&lt;210&gt; 4163

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4163

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568

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&lt;210&gt; 4164

&lt;211&gt; 187

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4164

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 Cys Gly Leu Gln Asp Pro Ala Gly Ser Arg Pro Leu Ser Pro Pro Phe  
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 Thr Glu Ala Ser Pro Arg Cys Pro Ala Gly Pro Ser Pro Leu Arg Ser  
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 Gln Ala Leu Arg Arg Ala Arg Met Val Pro Val Val Gln Gly Ser Pro  
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 Trp Thr Cys Arg His Met Ala Ile Glu Leu Gln  
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&lt;210&gt; 4165

&lt;211&gt; 717

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4165

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<211> 166

<212> PRT

<213> Homo sapiens

<400> 4166

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Val	Leu	Gly	Ile	Ile	Pro	Tyr	Ala	Gly	Ile	Asp	Leu	Ala	Val	Tyr	Glu
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Thr	Leu	Lys	Asn	Trp	Trp	Leu	Gln	Gln	Tyr	Ser	His	Asp	Ser	Ala	Asp
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Pro	Gly	Ile	Leu	Val	Leu	Leu	Ala	Cys	Gly	Thr	Ile	Ser	Ser	Thr	Cys
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Gly	Gln	Ile	Ala	Ser	Tyr	Pro	Leu	Ala	Leu	Val	Arg	Thr	Arg	Met	Gln
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Ala	Gln	Gly	Phe	His	His	Val	Ala	Gln	Ala	His	Leu	Glu	Leu	Val	Gly
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Ser	Arg	Asn	Ser	Pro	Ala	Phe	Ser	Leu	Pro	Thr	Cys	Trp	Asp	Tyr	Arg
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<211> 897

<212> DNA

<213> Homo sapiens

<400> 4167

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480

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 780  
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<211> 299

<212> PRT

<213> Homo sapiens

<400> 4168

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			20					25					30		
Gln	Thr	Ala	Gly	Val	Gln	Trp	Arg	Asp	Leu	Ser	Pro	Pro	Gln	Leu	Pro
		35					40					45			
Pro	Pro	Gly	Ile	Lys	Gln	Ser	Ser	Cys	Phe	Ser	Leu	Leu	Ser	Ser	Leu
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Gly	Ser	Glu	Gly	Gly	Val	Ala	Ala	Phe	Val	Asp	Phe	Val	Asp	Ile	Lys
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Ser	Ala	Gln	Lys	Ala	His	Asn	Ser	Val	Asn	Lys	Met	Gly	Asp	Arg	Asp
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Leu	Arg	Thr	Asp	Tyr	Asn	Glu	Pro	Gly	Thr	Ile	Pro	Ser	Ala	Ala	Arg
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Gly	Leu	Asp	Asp	Thr	Val	Ser	Ile	Ala	Ser	Arg	Ser	Arg	Glu	Val	Ser
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Gly	Phe	Arg	Gly	Gly	Gly	Gly	Gly	Pro	Ala	Tyr	Gly	Pro	Pro	Pro	Ser
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Leu	His	Ala	Arg	Glu	Gly	Arg	Tyr	Glu	Arg	Arg	Leu	Asp	Gly	Ala	Ser
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Asp	Asn	Arg	Glu	Arg	Ala	Tyr	Glu	His	Ser	Ala	Tyr	Gly	His	His	Glu
		180						185					190		
Arg	Gly	Thr	Gly	Gly	Phe	Asp	Arg	Thr	Arg	His	Tyr	Asp	Gln	Asp	Tyr
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Tyr	Arg	Asp	Pro	Arg	Glu	Arg	Thr	Leu	Gln	His	Gly	Leu	Tyr	Tyr	Ala
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Ser	Arg	Ser	Arg	Ser	Pro	Asn	Arg	Phe	Asp	Ala	His	Asp	Pro	Arg	Tyr
225					230					235					240
Glu	Pro	Arg	Ala	Arg	Glu	Gln	Phe	Thr	Leu	Pro	Ser	Val	Val	His	Arg
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Asp	Ile	Tyr	Arg	Asp	Asp	Ile	Thr	Arg	Glu	Val	Arg	Gly	Arg	Arg	Pro

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<211> 900

<212> PRT

<213> Homo sapiens

<400> 4170

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Ala	His	Leu	Arg	Ser	His	Gly	Leu	Glu	Pro	Ala	Ala	Pro	Ser	Pro	Arg
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Pro	Ser	Pro	Gln	Gly	Thr	Lys	Ala	Pro	Arg	Phe	Val	Pro	Leu	Thr	Ser
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Ile	Cys	Phe	Pro	Asp	Ser	Leu	Leu	Gln	Asp	Glu	Glu	Arg	Ser	Phe	Phe
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Gly	Leu	Ile	Gln	Ser	Gly	Pro	His	Gln	Ala	Ala	Pro	Pro	Pro	Pro	Pro
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Ile	Asp	Phe	Cys	Leu	Pro	Asn	Pro	Gly	Pro	Asp	Gly	Pro	Arg	Arg	Arg
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<210> 4171

<211> 889

<212> DNA

<213> Homo sapiens

<400> 4171

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<210> 4172

<211> 184

<212> PRT

<213> Homo sapiens

<400> 4172

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Leu	Val	Ile	Ile	Gly	Thr	Leu	Leu	Ala	Trp	Tyr	Leu	Cys	Phe	Leu	Ile
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Val	Phe	Ile	Leu	Pro	Leu	Asp	Val	Ser	Thr	Thr	Ile	Tyr	Asn	Arg	Cys
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Asp	Cys	Ala	Thr	Ala	Asn	Pro	Val	Pro	Ser	Gln	His	Pro	Cys	Phe	Lys
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Pro	Trp	Ser	Tyr	Ile	Pro	Asp	Gly	Ile	Met	Pro	Ile	Phe	Trp	Arg	Val
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Val	Tyr	Trp	Thr	Ser	Gln	Phe	Leu	Thr	Trp	Ile	Leu	Leu	Pro	Phe	Met
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Gln	Ser	Tyr	Ala	Arg	Ser	Gly	Gly	Phe	Ser	Ile	Thr	Gly	Lys	Ile	Lys
	130					135					140				
Thr	Ala	Leu	Ile	Glu	Asn	Ala	Ile	Tyr	Tyr	Gly	Thr	Tyr	Leu	Leu	Ile
145				150						155				160	
Phe	Gly	Ala	Phe	Leu	Ile	Tyr	Val	Ala	Val	Asn	Pro	His	Leu	His	Leu
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<210> 4173

<211> 404

<212> DNA

<213> Homo sapiens

<400> 4173

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 <212> PRT  
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 Gly Thr Pro Val Ser Lys Cys Ala Arg Ala Leu Gly Ser Ala Lys Gly  
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 Pro Leu Leu Cys Cys Cys Val Gln Ala Trp His Leu Gln Asp Gly Asp  
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<210> 4176

<211> 586

<212> PRT

<213> Homo sapiens

<400> 4176

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Ala	Gly	Leu	Arg	Ala	Ala	Met	Gly	Pro	Gly	Ile	Ser	Arg	Met	Asn	Asp
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Leu	Thr	Ile	Ile	Gln	Thr	Thr	Gln	Gly	Phe	Cys	Arg	Tyr	Leu	Glu	Lys
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Gln	Phe	Ser	Asp	Leu	Lys	Gln	Lys	Gly	Ile	Val	Ile	Ser	Phe	Asp	Ala
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Arg	Ala	His	Pro	Ser	Ser	Gly	Gly	Ser	Ser	Arg	Arg	Phe	Ala	Arg	Leu
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Ala	Ala	Thr	Thr	Phe	Ile	Ser	Gln	Gly	Ile	Pro	Val	Tyr	Leu	Phe	Ser
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Asp	Ile	Thr	Pro	Thr	Pro	Phe	Val	Pro	Phe	Thr	Val	Ser	His	Leu	Lys
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Leu	Cys	Ala	Gly	Ile	Met	Ile	Thr	Ala	Ser	His	Asn	Pro	Lys	Gln	Asp
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His	Asp	Lys	Gly	Ile	Ser	Gln	Ala	Ile	Glu	Glu	Asn	Leu	Glu	Pro	Trp
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Pro	Gln	Ala	Trp	Asp	Asp	Ser	Leu	Ile	Asp	Ser	Ser	Pro	Leu	Leu	His
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His	Thr	Ser	Val	His	Gly	Val	Gly	His	Ser	Phe	Val	Gln	Ser	Ala	Phe
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<212> DNA
<213> Homo sapiens
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&lt;210&gt; 4178

&lt;211&gt; 398

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens



&lt;400&gt; 4178

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Met Met Leu Lys Gly Ile Thr Arg Leu Ile Ser Arg Ile His Lys Leu
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Ala Ala His Leu Asp Asn Gln Val Pro Val Glu Ser Pro Arg Ala Ile
      35           40           45
Ser Arg Thr Asn Glu Asn Asp Pro Ala Lys His Gly Asp Gln His Glu
      50           55           60
Gly Gln His Tyr Asn Ile Ser Pro Gln Asp Leu Glu Thr Val Phe Pro
      65           70           75           80
His Gly Leu Pro Pro Arg Phe Val Met Gln Val Lys Thr Phe Ser Glu
      85           90           95
Ala Cys Leu Met Val Arg Lys Pro Ala Leu Glu Leu Leu His Tyr Leu
      100          105          110
Lys Asn Thr Ser Phe Ala Tyr Pro Ala Ile Arg Tyr Leu Leu Tyr Gly
      115          120          125
Glu Lys Gly Thr Gly Lys Thr Leu Ser Leu Cys His Val Phe His Phe
      130          135          140
Cys Ala Lys Gln Asp Trp Leu Ile Leu His Ile Pro Asp Ala His Leu
      145          150          155          160
Trp Val Lys Asn Cys Arg Asp Leu Leu Gln Ser Ser Tyr Asn Lys Gln
      165          170          175
Arg Phe Asp Gln Pro Leu Glu Ala Ser Thr Trp Leu Lys Asn Phe Lys
      180          185          190
Thr Thr Asn Glu Arg Phe Leu Asn Gln Ile Lys Val Gln Glu Lys Tyr
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Val Trp Asn Lys Arg Glu Leu Thr Glu Lys Gly Ser Pro Leu Gly Glu
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Val Val Glu Gln Gly Ile Thr Arg Val Arg Asn Ala Thr Asp Ala Val
      225          230          235          240
Gly Ile Val Leu Lys Glu Leu Lys Arg Gln Ser Ser Leu Gly Met Phe
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His Leu Leu Val Ala Val Asp Gly Ile Asn Ala Leu Trp Gly Arg Thr
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Thr Leu Lys Arg Glu Asp Lys Ser Pro Ile Ala Pro Glu Glu Leu Ala
      275          280          285
Leu Val His Asn Leu Arg Lys Met Met Lys Asn Asp Trp His Gly Gly
      290          295          300
Ala Ile Val Ser Ala Leu Ser Gln Thr Gly Ser Leu Phe Lys Pro Arg
      305          310          315          320
Lys Ala Tyr Leu Pro Gln Glu Leu Leu Gly Lys Glu Gly Phe Asp Ala
      325          330          335
Leu Asp Pro Phe Ile Pro Ile Leu Val Ser Asn Tyr Asn Pro Lys Glu
      340          345          350
Phe Glu Ser Cys Ile Gln Tyr Tyr Leu Glu Asn Asn Trp Leu Gln His
      355          360          365
Glu Lys Ala Pro Thr Glu Glu Gly Lys Lys Glu Leu Leu Phe Leu Ser
      370          375          380
Asn Ala Asn Pro Ser Leu Leu Glu Arg His Cys Ala Tyr Leu
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&lt;210&gt; 4179

&lt;211&gt; 2208

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4179

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<210> 4180

<211> 257

<212> PRT

<213> Homo sapiens

<400> 4180

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Thr	Asp	Cys	Val	Met	Ile	Ser	Thr	Arg	Leu	Val	Ser	Ser	Val	His	Ala
		35				40					45				
Val	Leu	Ala	Thr	Gly	Ser	Gly	Ile	Val	Ile	Ile	Arg	Ser	Cys	Asp	Asp
	50				55					60					
Val	Ile	Thr	Gly	Arg	His	Trp	Leu	Ala	Arg	Glu	Tyr	Val	Trp	Phe	Leu
65				70					75					80	
Ile	Pro	Tyr	Met	Ile	Tyr	Asp	Ser	Tyr	Ala	Met	Tyr	Leu	Cys	Glu	Trp
		85						90					95		
Cys	Arg	Thr	Arg	Asp	Gln	Asn	Arg	Ala	Pro	Ser	Leu	Thr	Leu	Arg	Asn
		100						105					110		
Phe	Leu	Ser	Arg	Asn	Arg	Leu	Met	Ile	Thr	His	His	Ala	Val	Ile	Leu
		115				120						125			
Phe	Val	Leu	Val	Pro	Val	Ala	Gln	Arg	Leu	Arg	Gly	Asp	Leu	Gly	Asp
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Phe	Phe	Val	Gly	Cys	Ile	Phe	Thr	Ala	Glu	Leu	Ser	Thr	Pro	Phe	Val
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Ser	Leu	Gly	Arg	Val	Leu	Ile	Gln	Leu	Lys	Gln	Gln	His	Thr	Leu	Leu
			165					170						175	
Tyr	Lys	Val	Asn	Gly	Ile	Leu	Thr	Leu	Ala	Thr	Phe	Leu	Ser	Cys	Arg

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Ile	Leu	Leu	Phe	Pro	Phe	Met	Tyr	Trp	Ser	Tyr	Gly	Arg	Gln	Gln	Gly
	195						200					205			
Leu	Ser	Leu	Leu	Gln	Val	Pro	Phe	Ser	Ile	Pro	Phe	Tyr	Cys	Asn	Val
	210						215				220				
Ala	Asn	Ala	Phe	Leu	Val	Ala	Pro	Gln	Ile	Tyr	Trp	Phe	Cys	Leu	Leu
225					230					235				240	
Cys	Arg	Lys	Ala	Val	Arg	Leu	Phe	Asp	Thr	Pro	Gln	Ala	Lys	Lys	Asp
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Gly

&lt;210&gt; 4181

&lt;211&gt; 735

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4181

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&lt;210&gt; 4182

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4182

His	Pro	Ala	Gly	Ile	Glu	Phe	Ser	Leu	Cys	Leu	Leu	Phe	Ala	Lys	Leu
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Val	Ser	Tyr	Thr	Phe	Leu	Tyr	Trp	Leu	Pro	Leu	Tyr	Ile	Ala	Asn	Val

	20		25		30										
Ala	His	Phe	Ser	Ala	Lys	Glu	Ala	Gly	Asp	Leu	Ser	Thr	Leu	Phe	Asp
	35						40					45			
Val	Gly	Gly	Ile	Ile	Gly	Gly	Ile	Val	Ala	Gly	Leu	Val	Ser	Asp	Tyr
	50					55					60				
Thr	Asn	Gly	Arg	Ala	Thr	Thr	Cys	Cys	Val	Met	Leu	Ile	Leu	Ala	Ala
65					70				75					80	
Pro	Met	Met	Phe	Leu	Tyr	Asn	Tyr	Ile	Gly	Gln	Asp	Gly	Ile	Ala	Ser
			85						90					95	
Ser	Ile	Val	Met	Leu	Ile	Ile	Cys	Gly	Gly	Leu	Val	Asn	Gly	Pro	Tyr
	100							105				110			
Ala	Xaa	Ile	Thr	Thr	Ala	Val	Ser	Ala	Asp	Leu	Gly	Thr	His	Lys	Ser
	115							120				125			
Leu	Lys	Gly	Asn	Ala	Lys	Ala	Leu	Ser	Thr	Val	Thr	Ala	Ile	Ile	Asp
	130					135					140				
Gly	Thr	Gly	Ser	Ile	Gly	Ala	Ala	Leu	Gly	Pro	Leu	Leu	Ala	Gly	Leu
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Ile	Ser	Pro	Thr	Gly	Trp	Asn	Asn	Val	Phe	Tyr	Met	Leu	Ile	Ser	Ala
				165					170					175	
Asp	Val	Leu	Ala	Cys	Leu	Leu	Leu	Cys	Arg	Leu	Val	Tyr	Lys	Glu	Ile
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&lt;210&gt; 4183

&lt;211&gt; 1129

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4183

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<210> 4184

<211> 374

<212> PRT

<213> Homo sapiens

<400> 4184

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		20						25					30		
Arg	Phe	Met	Pro	Gln	Gln	Asn	Ser	Pro	Val	Pro	Ser	Pro	Tyr	Ala	Pro
		35					40					45			
Gln	Ser	Pro	Ala	Gly	Tyr	Met	Pro	Tyr	Ser	His	Pro	Ser	Ser	Tyr	Thr
	50					55					60				
Thr	His	Pro	Gln	Met	Gln	Gln	Ala	Ser	Val	Ser	Ser	Pro	Ile	Val	Ala
65					70					75				80	
Gly	Gly	Leu	Arg	Asn	Ile	His	Asp	Asn	Lys	Val	Ser	Gly	Pro	Leu	Ser
				85					90					95	
Gly	Asn	Ser	Ala	Asn	His	His	Ala	Asp	Asn	Pro	Arg	His	Gly	Ser	Ser
			100					105					110		
Glu	Asp	Tyr	Leu	His	Met	Val	His	Arg	Leu	Ser	Ser	Asp	Asp	Gly	Asp
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Ser	Ser	Thr	Met	Arg	Asn	Ala	Ala	Ser	Phe	Pro	Leu	Arg	Ser	Pro	Gln
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Pro	Val	Cys	Ser	Pro	Ala	Gly	Ser	Glu	Gly	Thr	Pro	Lys	Gly	Ser	Arg
145					150					155				160	
Pro	Pro	Leu	Ile	Leu	Gln	Ser	Gln	Ser	Leu	Pro	Cys	Ser	Ser	Pro	Arg
				165					170					175	
Asp	Val	Pro	Pro	Asp	Ile	Leu	Leu	Asp	Ser	Pro	Glu	Arg	Lys	Gln	Lys
			180					185					190		
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Gln	Glu	Asp	Met	Leu	Ser	Gly	Met	Glu	Asn	Ser	Asn	Val	Ser	Glu	Asn
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Asp	Ile	Pro	Phe	Asn	Val	Gln	Tyr	Gln	Gly	Gln	Thr	Ser	Lys	Thr	Pro
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 325                      330                      335  
 Val Glu Leu Asp Ala Leu Ala Glu Ile Glu Arg Ile Glu Arg Glu Ser  
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 Ala Ile Glu Arg Glu Arg Phe Ser Lys Glu Val Gln Asp Lys Asp Lys  
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<210> 4185

<211> 1481

<212> DNA

<213> Homo sapiens

<400> 4185

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 1020

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 1380  
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 1481

&lt;210&gt; 4186

&lt;211&gt; 385

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4186

Xaa	Val	Phe	Lys	Ser	Leu	Asp	Lys	Lys	Asn	Asp	Gly	Arg	Ile	Asp	Ala
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Gln	Glu	Ile	Met	Gln	Ser	Leu	Arg	Asp	Leu	Gly	Val	Lys	Ile	Ser	Glu
			20					25					30		
Gln	Gln	Ala	Glu	Lys	Ile	Leu	Lys	Ser	Met	Asp	Lys	Asn	Gly	Thr	Met
		35					40					45			
Thr	Ile	Asp	Trp	Asn	Glu	Trp	Arg	Asp	Tyr	His	Leu	Leu	His	Pro	Val
	50				55						60				
Glu	Asn	Ile	Pro	Glu	Ile	Ile	Leu	Tyr	Trp	Lys	His	Ser	Thr	Ile	Phe
65					70					75				80	
Asp	Val	Gly	Glu	Asn	Leu	Thr	Val	Pro	Asp	Glu	Phe	Thr	Val	Glu	Glu
				85					90					95	
Arg	Gln	Thr	Gly	Met	Trp	Trp	Arg	His	Leu	Val	Ala	Gly	Gly	Gly	Ala
			100					105						110	
Gly	Ala	Val	Ser	Arg	Thr	Cys	Thr	Ala	Pro	Leu	Asp	Arg	Leu	Lys	Val
		115					120					125			
Leu	Met	Gln	Val	His	Ala	Ser	Arg	Ser	Asn	Asn	Met	Gly	Ile	Val	Gly
	130						135					140			
Gly	Phe	Thr	Gln	Met	Ile	Arg	Glu	Gly	Gly	Ala	Arg	Ser	Leu	Trp	Arg
145					150					155				160	
Gly	Asn	Gly	Ile	Asn	Val	Leu	Lys	Ile	Ala	Pro	Glu	Ser	Ala	Ile	Lys
			165						170					175	
Phe	Met	Ala	Tyr	Glu	Gln	Ile	Lys	Arg	Leu	Val	Gly	Ser	Asp	Gln	Glu
		180						185					190		
Thr	Leu	Arg	Ile	His	Glu	Arg	Leu	Val	Ala	Gly	Ser	Leu	Ala	Gly	Ala
		195					200					205			
Ile	Ala	Gln	Ser	Ser	Ile	Tyr	Pro	Met	Glu	Val	Leu	Lys	Thr	Arg	Met
	210					215					220				
Ala	Leu	Arg	Lys	Thr	Gly	Gln	Tyr	Ser	Gly	Met	Leu	Asp	Cys	Ala	Arg
225					230					235				240	
Arg	Ile	Leu	Ala	Arg	Glu	Gly	Val	Ala	Ala	Phe	Tyr	Lys	Gly	Tyr	Val



	245		250		255
Pro Asn Met	Leu Gly Ile Ile	Pro Tyr Ala Gly	Ile Asp Leu Ala Val		
	260	265	270		
Tyr Glu Thr	Leu Lys Asn Ala Trp	Leu Gln His Tyr	Ala Val Asn Ser		
	275	280	285		
Ala Asp Pro	Gly Val Phe Val	Leu Leu Ala Cys	Gly Thr Met Ser Ser		
	290	295	300		
Thr Cys Gly	Gln Leu Ala Ser Tyr	Pro Leu Ala Leu	Val Arg Thr Arg		
305	310	315	320		
Met Gln Ala	Gln Ala Ser Ile	Glu Gly Ala Pro	Glu Val Thr Met Ser		
	325	330	335		
Ser Leu Phe	Lys His Ile Leu Arg	Thr Glu Gly Ala	Phe Gly Leu Tyr		
	340	345	350		
Arg Gly Leu	Ala Pro Asn Phe Met	Lys Val Ile Pro	Ala Val Ser Ile		
	355	360	365		
Ser Tyr Val	Val Tyr Glu Asn Leu	Lys Ile Thr Leu	Gly Val Gln Ser		
370	375	380			

Arg  
385

&lt;210&gt; 4187

&lt;211&gt; 1087

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4187

```

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240
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720
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840

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 1087

<210> 4188

<211> 272

<212> PRT

<213> Homo sapiens

<400> 4188

Xaa	Ala	Ile	Asp	Arg	Ala	Cys	Pro	Glu	Ser	Ala	Ser	Leu	Leu	Gly	His
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Pro	Arg	Val	Leu	Ala	Asp	Ser	Phe	Pro	Asp	Ser	Ser	Pro	Tyr	Glu	Gly
			20					25					30		
Tyr	Asn	Tyr	Gly	Ser	Phe	Glu	Asn	Val	Ser	Gly	Ser	Thr	Asp	Gly	Leu
	35					40						45			
Val	Asp	Ser	Ala	Gly	Thr	Gly	Asp	Leu	Ser	Tyr	Gly	Tyr	Gln	Gly	Arg
	50					55					60				
Ser	Phe	Glu	Pro	Val	Gly	Thr	Arg	Pro	Arg	Val	Asp	Ser	Met	Ser	Ser
65					70					75				80	
Val	Glu	Glu	Asp	Asp	Tyr	Asp	Thr	Leu	Thr	Asp	Ile	Asp	Ser	Asp	Lys
				85					90					95	
Asn	Val	Ile	Arg	Thr	Lys	Gln	Tyr	Leu	Tyr	Val	Ala	Asp	Leu	Ala	Arg
				100				105					110		
Lys	Asp	Lys	Arg	Val	Leu	Arg	Lys	Lys	Tyr	Gln	Ile	Tyr	Phe	Trp	Asn
	115					120						125			
Ile	Ala	Thr	Ile	Ala	Val	Phe	Tyr	Ala	Leu	Pro	Val	Val	Gln	Leu	Val
	130					135					140				
Ile	Thr	Tyr	Pro	Glu	Xaa	Gly	Gly	Cys	Thr	Arg	Gly	Ser	Arg	Asp	Ile
145				150					155					160	
Cys	Ser	Ser	Asn	Phe	Leu	Cys	Ala	His	Pro	Leu	Gly	Asn	Leu	Ser	Ala
			165						170					175	
Phe	Asn	Asn	Ile	Leu	Ser	Asn	Leu	Gly	Tyr	Ile	Leu	Leu	Gly	Leu	Leu
			180					185					190		
Phe	Leu	Leu	Ile	Ile	Leu	Gln	Arg	Glu	Ile	Asn	His	Asn	Arg	Ala	Leu
	195						200					205			
Leu	Arg	Asn	Asp	Leu	Cys	Ala	Leu	Glu	Cys	Gly	Ile	Pro	Lys	His	Phe
	210					215				220					
Gly	Leu	Phe	Tyr	Ala	Met	Gly	Thr	Ala	Leu	Met	Met	Glu	Gly	Leu	Leu
225				230					235					240	
Ser	Ala	Cys	Tyr	His	Val	Cys	Pro	Asn	Tyr	Thr	Asn	Phe	Gln	Phe	Gly
			245						250					255	
Glu	Trp	Gly	Val	Leu	Leu	Phe	Trp	Leu	Asn	Leu	Gln	Gln	Gly	Pro	Ala
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<210> 4189

<211> 1570

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4189

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180  
acagaagtga agaaagatga ggccggagaa aactattcca aggatcaagg tggtcggaca  
240  
ttgtgtggtg taatgaggat tggcctgggt gcaaaaggct tgctgattaa agatgatatg  
300  
gacttggagc tggttttaat gtgcaaagac aaaccacag agaccctgtt aaatacagtc  
360  
aaagataatc ttctatttca gattcagaaa ctcacagaag agaaatatca agtggaaacaa  
420  
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480  
gtgataactta cctcacctct aattagggac gaattggaga agaaggatgg agaaaatgtt  
540  
tcgatgaaag atcctccgga cttattggac aggcagaaat gcctgaacgc cttggcgtct  
600  
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660  
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720  
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1080  
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1140  
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1440  
ggtggaagcc atgacaagcg ctttgtaatg gaggtagaag tagatggaca gaaattcaga  
1500

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<210> 4190

<211> 523

<212> PRT

<213> Homo sapiens

<400> 4190

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His	Ser	Thr	Ile	Tyr	Pro	Ser	Pro	Glu	Glu	Leu	Glu	Ala	Val	Gln	Asn
			20					25					30		
Met	Val	Ser	Thr	Val	Glu	Cys	Ala	Leu	Lys	His	Val	Ser	Asp	Trp	Leu
		35					40					45			
Asp	Glu	Thr	Asn	Lys	Gly	Thr	Lys	Thr	Glu	Gly	Glu	Thr	Glu	Val	Lys
	50					55					60				
Lys	Asp	Glu	Ala	Gly	Glu	Asn	Tyr	Ser	Lys	Asp	Gln	Gly	Gly	Arg	Thr
65					70					75				80	
Leu	Cys	Gly	Val	Met	Arg	Ile	Gly	Leu	Val	Ala	Lys	Gly	Leu	Leu	Ile
				85					90					95	
Lys	Asp	Asp	Met	Asp	Leu	Glu	Leu	Val	Leu	Met	Cys	Lys	Asp	Lys	Pro
			100					105					110		
Thr	Glu	Thr	Leu	Leu	Asn	Thr	Val	Lys	Asp	Asn	Leu	Pro	Ile	Gln	Ile
		115					120						125		
Gln	Lys	Leu	Thr	Glu	Glu	Lys	Tyr	Gln	Val	Glu	Gln	Cys	Val	Asn	Glu
	130					135					140				
Ala	Ser	Ile	Ile	Ile	Arg	Asn	Thr	Lys	Glu	Pro	Thr	Leu	Thr	Leu	Lys
145					150					155					160
Val	Ile	Leu	Thr	Ser	Pro	Leu	Ile	Arg	Asp	Glu	Leu	Glu	Lys	Lys	Asp
				165					170					175	
Gly	Glu	Asn	Val	Ser	Met	Lys	Asp	Pro	Pro	Asp	Leu	Leu	Asp	Arg	Gln
		180					185						190		
Lys	Cys	Leu	Asn	Ala	Leu	Ala	Ser	Leu	Arg	His	Ala	Lys	Trp	Phe	Gln
		195				200						205			
Ala	Arg	Ala	Asn	Gly	Leu	Lys	Ser	Cys	Val	Ile	Val	Leu	Arg	Ile	Leu
	210					215					220				
Arg	Asp	Leu	Cys	Asn	Arg	Val	Pro	Thr	Trp	Ala	Pro	Leu	Lys	Gly	Trp
225				230						235					240
Pro	Leu	Glu	Leu	Ile	Cys	Glu	Lys	Ser	Ile	Gly	Thr	Cys	Asn	Arg	Pro
				245					250					255	
Leu	Gly	Ala	Gly	Glu	Ala	Leu	Arg	Arg	Val	Met	Glu	Cys	Leu	Ala	Ser
			260				265						270		
Gly	Ile	Leu	Leu	Pro	Gly	Gly	Pro	Gly	Leu	His	Asp	Pro	Cys	Glu	Arg
		275					280						285		
Asp	Pro	Thr	Asp	Ala	Leu	Ser	Tyr	Met	Thr	Ile	Gln	Gln	Lys	Glu	Asp
	290					295					300				
Ile	Thr	His	Ser	Ala	Gln	His	Ala	Leu	Arg	Leu	Ser	Ala	Phe	Gly	Gln
305					310					315					320
Ile	Tyr	Lys	Val	Leu	Glu	Met	Asp	Pro	Leu	Pro	Ser	Ser	Lys	Pro	Phe
				325					330					335	
Gln	Lys	Tyr	Ser	Trp	Ser	Val	Thr	Asp	Lys	Glu	Gly	Ala	Gly	Ser	Ser

	340		345		350										
Ala	Leu	Lys	Arg	Pro	Phe	Glu	Asp	Gly	Leu	Gly	Asp	Asp	Lys	Asp	Pro
	355						360				365				
Asn	Lys	Lys	Met	Lys	Arg	Asn	Leu	Arg	Lys	Ile	Leu	Asp	Ser	Lys	Ala
	370						375				380				
Ile	Asp	Leu	Met	Asn	Ala	Leu	Met	Arg	Leu	Asn	Gln	Ile	Arg	Pro	Gly
385					390					395					400
Leu	Gln	Tyr	Lys	Leu	Leu	Ser	Gln	Ser	Gly	Pro	Val	His	Ala	Pro	Val
			405						410				415		
Phe	Thr	Met	Ser	Val	Asp	Val	Asp	Gly	Thr	Thr	Tyr	Glu	Ala	Ser	Gly
		420						425				430			
Pro	Ser	Lys	Lys	Thr	Ala	Lys	Leu	His	Val	Ala	Val	Lys	Val	Leu	Gln
	435						440				445				
Ala	Met	Gly	Tyr	Pro	Thr	Gly	Phe	Asp	Ala	Asp	Ile	Glu	Cys	Met	Ser
	450					455					460				
Ser	Asp	Glu	Lys	Arg	Arg	Gly	Leu	Lys	Tyr	Glu	Leu	Ile	Ser	Glu	Thr
465					470					475					480
Gly	Gly	Ser	His	Asp	Lys	Arg	Phe	Val	Met	Glu	Val	Glu	Val	Asp	Gly
			485						490					495	
Gln	Lys	Phe	Arg	Gly	Ala	Gly	Pro	Asn	Lys	Lys	Val	Ala	Lys	Ala	Ser
		500						505				510			
Ala	Ala	Leu	Leu	Ala	Xaa	Gly	Glu	Thr	Val	Phe					
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&lt;210&gt; 4191

&lt;211&gt; 1661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4191

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120  
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180  
aggaatcatg tggacgcca ggtgcagacg gagggcccg tgctgtcag cgtgcagccc  
240  
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360  
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420  
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 1380  
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 1661

&lt;210&gt; 4192

&lt;211&gt; 517

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4192

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 Gly Pro Leu Gln Asp Glu Thr Leu Gly Val Ala Ser Val Pro Ser Gln  
 20 25 30  
 Trp Arg Ala Val Gln Gly Ile Arg Gly Glu Thr Lys Ser Cys Gln Thr  
 35 40 45  
 Ala Ser Ile Ala Thr Ala Ser Ala Ser Ala Gln Ala Arg Asn His Val  
 50 55 60  
 Asp Ala Gln Val Gln Thr Glu Ala Pro Val Pro Val Ser Val Gln Pro  
 65 70 75 80  
 Pro Ser Gln Tyr Asp Ile Pro Arg Leu Ala Ala Phe Leu Arg Arg Val  
 85 90 95  
 Glu Ala Met Val Ile Arg Glu Leu Asn Lys Asn Trp Gln Ser His Ala  
 100 105 110  
 Phe Asp Gly Phe Glu Val Asn Trp Thr Glu Gln Gln Gln Met Val Ser

115				120				125							
Cys	Leu	Tyr	Thr	Leu	Gly	Tyr	Pro	Pro	Ala	Gln	Ala	Gln	Gly	Leu	His
	130					135					140				
Val	Thr	Ser	Ile	Ser	Trp	Asn	Ser	Thr	Gly	Ser	Val	Val	Ala	Cys	Ala
145					150					155					160
Tyr	Gly	Arg	Leu	Asp	His	Gly	Asp	Trp	Ser	Thr	Leu	Lys	Ser	Phe	Val
				165					170					175	
Cys	Ala	Trp	Asn	Leu	Asp	Arg	Arg	Asp	Leu	Arg	Pro	Gln	Gln	Pro	Ser
			180					185					190		
Ala	Val	Val	Glu	Val	Pro	Ser	Ala	Val	Leu	Cys	Leu	Ala	Phe	His	Pro
		195					200					205			
Thr	Gln	Pro	Ser	His	Val	Ala	Gly	Gly	Leu	Tyr	Ser	Gly	Glu	Val	Leu
	210				215					220					
Val	Trp	Asp	Leu	Ser	Arg	Leu	Glu	Asp	Pro	Leu	Leu	Trp	Arg	Thr	Gly
225					230					235					240
Leu	Thr	Asp	Asp	Thr	His	Thr	Asp	Pro	Val	Ser	Gln	Val	Val	Trp	Leu
			245						250					255	
Pro	Glu	Pro	Gly	His	Ser	His	Arg	Phe	Gln	Val	Leu	Ser	Val	Ala	Thr
			260					265					270		
Asp	Gly	Lys	Val	Leu	Leu	Trp	Gln	Gly	Ile	Gly	Val	Gly	Gln	Leu	Gln
	275						280				285				
Leu	Thr	Glu	Gly	Phe	Ala	Leu	Val	Met	Gln	Gln	Leu	Pro	Arg	Ser	Thr
	290				295					300					
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;213&gt; Homo sapiens

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&lt;211&gt; 186

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4200

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 50 55 60  
 Leu Leu Ala Ser Gly Xaa Ala Ala Leu Ala Cys Val Phe Leu Gly Val

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Asn	Glu	Ala	Ala	Ile	Thr	Thr	Phe	Ser	Val	Leu	Gly	Leu	Phe	Ser	Ser
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Gln	Ala	Ala	Ala	Ile	Leu	Ser	Thr	Leu	Leu	Ala	Ala	Glu	Val	Ile	Pro
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&lt;211&gt; 1368

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4203

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			20					25					30		
Tyr	Thr	Val	Val	Pro	Phe	Val	Leu	Leu	Ser	Ile	Lys	Pro	Ser	Leu	Thr
		35					40				45				
Phe	Tyr	Ser	Ser	Trp	Tyr	Tyr	Cys	Leu	His	Ile	Leu	Gly	Ile	Leu	Val
	50				55					60					
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&lt;210&gt; 4206

&lt;211&gt; 829

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4206

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1	5	10	15
Pro Asp Val Ile Phe Gln Glu Asp Thr Ser His Thr Ser Ala Gln Lys			
	20	25	30
Ala Pro Glu Leu Arg Gly Pro Glu Ser Pro Ser Pro Lys Pro Glu Tyr			
	35	40	45
Ser Val Ile Val Glu Val Arg Ser Asp Asp Asp Lys Asp Glu Asp Thr			
	50	55	60
His Ser Arg Lys Ser Thr Val Thr Asp Glu Ser Glu Met Gln Asp Met			
65	70	75	80
Met Thr Arg Gly Asn Leu Gly Leu Leu Glu Gln Ala Ile Ala Leu Lys			
	85	90	95
Ala Glu Gln Val Arg Thr Val Cys Glu Pro Gly Cys Pro Pro Ala Glu			
	100	105	110
Gln Ser Gln Leu Gly Leu Gly Glu Pro Gly Lys Ala Ala Lys Pro Leu			
	115	120	125
Asp Thr Val Arg Lys Ser Tyr Tyr Ser Lys Asp Pro Ser Arg Ala Glu			
	130	135	140
Lys Arg Glu Ile Lys Cys Pro Thr Pro Gly Cys Asp Gly Thr Gly His			
145	150	155	160
Val Thr Gly Leu Tyr Pro His His Arg Ser Leu Ser Gly Cys Pro His			
	165	170	175
Lys Asp Arg Ile Pro Pro Glu Ile Leu Ala Met His Glu Asn Val Leu			
	180	185	190
Lys Cys Pro Thr Pro Gly Cys Thr Gly Gln Gly His Val Asn Ser Asn			
	195	200	205
Arg Asn Thr His Arg Ser Leu Ser Gly Cys Pro Ile Ala Ala Ala Glu			
	210	215	220
Lys Leu Ala Lys Ser His Glu Lys Gln Gln Pro Gln Thr Gly Asp Pro			
225	230	235	240
Ser Lys Ser Ser Ser Asn Ser Asp Arg Ile Leu Arg Pro Met Cys Phe			
	245	250	255
Val Lys Gln Leu Glu Val Pro Pro Tyr Gly Ser Tyr Arg Pro Asn Val			
	260	265	270
Ala Pro Ala Thr Pro Arg Ala Asn Leu Ala Lys Glu Leu Glu Lys Phe			
	275	280	285
Ser Lys Val Thr Phe Asp Tyr Ala Ser Phe Asp Ala Gln Val Phe Gly			
	290	295	300
Lys Arg Met Leu Ala Pro Lys Ile Gln Thr Ser Glu Thr Ser Pro Lys			
305	310	315	320
Ala Phe Gln Cys Phe Asp Tyr Ser Gln Asp Ala Glu Ala Ala His Met			
	325	330	335
Ala Ala Thr Ala Ile Leu Asn Leu Ser Thr Arg Cys Trp Glu Met Pro			
	340	345	350
Glu Asn Leu Ser Thr Lys Pro Gln Asp Leu Pro Ser Lys Ser Val Asp			
	355	360	365
Ile Glu Val Asp Glu Asn Gly Thr Leu Asp Leu Ser Met His Lys His			
	370	375	380
Arg Lys Arg Glu Asn Ala Phe Pro Ser Ser Ser Ser Cys Ser Ser Ser			
385	390	395	400
Pro Gly Val Lys Ser Pro Asp Ala Ser Gln Arg His Ser Ser Thr Ser			
	405	410	415
Ala Pro Ser Ser Ser Met Thr Ser Pro Gln Ser Ser Gln Ala Ser Arg			
	420	425	430
Gln Asp Glu Trp Asp Arg Pro Leu Asp Tyr Thr Lys Pro Ser Arg Leu			

435 440 445  
 Arg Glu Glu Glu Pro Glu Glu Ser Glu Pro Ala Ala His Ser Phe Ala  
 450 455 460  
 Ser Ser Glu Ala Asp Asp Gln Glu Val Ser Glu Glu Asn Phe Glu Glu  
 465 470 475 480  
 Arg Lys Tyr Pro Gly Glu Val Thr Leu Thr Asn Phe Lys Leu Lys Phe  
 485 490 495  
 Leu Ser Lys Asp Ile Lys Lys Glu Leu Thr Cys Pro Thr Pro Gly  
 500 505 510  
 Cys Asp Gly Ser Gly His Ile Thr Gly Asn Tyr Ala Ser His Arg Ser  
 515 520 525  
 Leu Ser Gly Cys Pro Leu Ala Asp Lys Ser Leu Arg Asn Leu Met Ala  
 530 535 540  
 Ala His Ser Ala Asp Leu Lys Cys Pro Thr Pro Gly Cys Asp Gly Ser  
 545 550 555 560  
 Gly His Ile Thr Gly Asn Tyr Ala Ser His Arg Ser Leu Ser Gly Cys  
 565 570 575  
 Pro Arg Ala Lys Lys Ser Gly Val Lys Val Ala Pro Thr Lys Asp Asp  
 580 585 590  
 Lys Glu Asp Pro Glu Leu Met Lys Cys Pro Val Pro Gly Cys Val Gly  
 595 600 605  
 Leu Gly His Ile Ser Gly Lys Tyr Ala Ser His Arg Ser Ala Ser Gly  
 610 615 620  
 Cys Pro Leu Ala Ala Arg Arg Gln Lys Glu Gly Ser Leu Asn Gly Ser  
 625 630 635 640  
 Ser Phe Ser Trp Lys Ser Leu Lys Asn Glu Gly Pro Thr Cys Pro Thr  
 645 650 655  
 Pro Gly Cys Asp Gly Ser Gly His Ala Asn Gly Ser Phe Leu Thr His  
 660 665 670  
 Arg Ser Leu Ser Gly Cys Pro Arg Ala Thr Phe Ala Gly Lys Lys Gly  
 675 680 685  
 Lys Leu Ser Gly Asp Glu Val Leu Ser Pro Lys Phe Lys Thr Ser Asp  
 690 695 700  
 Val Leu Glu Asn Asp Glu Glu Ile Lys Gln Leu Asn Gln Glu Ile Arg  
 705 710 715 720  
 Asp Leu Asn Glu Ser Asn Ser Glu Met Glu Ala Ala Met Val Gln Leu  
 725 730 735  
 Gln Ser Gln Ile Ser Ser Met Glu Lys Asn Leu Lys Asn Ile Glu Glu  
 740 745 750  
 Glu Asn Lys Leu Ile Glu Glu Gln Asn Glu Ala Leu Phe Leu Glu Leu  
 755 760 765  
 Ser Gly Leu Ser Gln Ala Leu Ile Gln Ser Leu Ala Asn Ile Arg Leu  
 770 775 780  
 Pro His Met Glu Pro Ile Cys Glu Gln Asn Phe Asp Ala Tyr Val Ser  
 785 790 795 800  
 Thr Leu Thr Asp Met Tyr Ser Asn Gln Asp Pro Glu Asn Lys Asp Leu  
 805 810 815  
 Leu Glu Ser Ile Lys Gln Ala Val Arg Gly Ile Gln Val  
 820 825

&lt;210&gt; 4207

&lt;211&gt; 1016

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4207

tttttttttg tgatttgggt ctgatctgcc tttgcatctg aagttcttga ctagtcagaa  
 60  
 gttttcttatt atttctgaca gacagggtct gaggagaaat taatttagtc ttttttcggg  
 120  
 tatcaactac tccaacagtt ttgccatgat cacgtaattg agctacataa tccaaagacc  
 180  
 gctgggacaa ctcatatgcc ttacgaggac cttttttcag gccaaagtct tcagctgttg  
 240  
 aagttggctc aggacactga cgaaatttct ttggcggcac tatagcagga gttgttctac  
 300  
 aacttaggta atttgaactt ctattctgtc cttttttggc atctgaatga gttttcttag  
 360  
 gggctcttaga aactggaact ttctgatgg gttctgtaca agtacaaagc tttgaagact  
 420  
 tcttttgtga aaccgtagtg gctctctgaa tacgtgaatt gggagttgaa gtccttctat  
 480  
 caatactttt aaaatcattt cccacaagct ctctcttatt agtatcagac tggccctcat  
 540  
 ttctgacaga agatgaagac ctacacaggat cttcagccat tggtttttca gatcgttttc  
 600  
 tcttaggctt ttttacttca atttcacaaa attcttcaac agaaatactc cgtgggtcttg  
 660  
 tgtgttcttc aatgccctct gtcctttttt taacaacttc agatacataa tctgtacaac  
 720  
 cctgaccatt tgtagtattg gctataggag ccaaacattt tttctcacca tcttgaactg  
 780  
 aattattatc gtctggatga tcttgccaaa ctgaaaacac ttcagatgaa ctttcaaact  
 840  
 caaaacactg agaatcagat tcttcaaact gaaaaagagt ctctgtcttt tcttccttta  
 900  
 ctggattctt ttctcttta ctattaactg ttgaaacgtg ctgctctgga tgttcctct  
 960  
 caaggcatat tttgtcctgt ttagtgagtt tctcaagact caggattctt tcatca  
 1016

&lt;210&gt; 4208

&lt;211&gt; 193

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4208

Met Ala Glu Asp Pro Val Arg Ser Ser Ser Ser Val Arg Asn Glu Gly  
 1 5 10 15  
 Gln Ser Asp Thr Asn Lys Arg Glu Leu Val Gly Asn Asp Phe Lys Ser  
 20 25 30  
 Ile Asp Arg Arg Thr Ser Thr Pro Asn Ser Arg Ile Gln Arg Ala Thr  
 35 40 45  
 Thr Val Ser Gln Lys Lys Ser Ser Lys Leu Cys Thr Cys Thr Glu Pro  
 50 55 60  
 Ile Arg Lys Val Pro Val Ser Lys Thr Pro Lys Lys Thr His Ser Asp  
 65 70 75 80  
 Ala Lys Lys Gly Gln Asn Arg Ser Ser Asn Tyr Leu Ser Cys Arg Thr

3404

gagaccgcct cggagctggg tcgagaggag gaggatgatg tggacctgga gctgcgcctg  
1020  
gcccgccttcg agcacctcat cagccggcgg cccctgcacc tcagcagcgt cttgctgcgc  
1080  
caaaaccac accacgtgca cgagtggcac aagcgtgtcg ccctgcacca gggccgcccc  
1140  
cgggagatca tcaacaccta cacagaggct gtgcagacgg tggacccctt caaggccaca  
1200  
ggcaagcccc acactctgtg ggtggcggtt gccaaagttt atgaggacaa cggacagctg  
1260  
gacgatgccc gtgtcatcct ggagaaggcc accaagggtga acttcaagca ggtggatgac  
1320  
ctggcaagcg tgtggtgtca gtgcggagag ctggagctcc gacacgagaa ctacgatgag  
1380  
gccttgccgc tgctgcgaaa ggccacggcg ctgcctccgc cgggcccagat atttgatggt  
1440  
tcagagcccc tgcaaacgg cgtgtacaag tcaactgaagg tctggtccat gctcgccgac  
1500  
ctggaggaga gcctcggcac cttccagtcc accaaggccg tgtacgaccg catcctggac  
1560  
ctgcgtatcg caacacccca gatcgtcatc aactatgcc a tgttcctgga ggagcacaag  
1620  
tacttcgagg agagcttcaa ggcgtagag cgcggcatct cgctgttcaa gtggcccaac  
1680  
gtgtccgaca tctggagcac ctacctgacc aaattcattg cccgctatgg gggccgcaag  
1740  
ctggagcggg cacgggacct gtttgaacag gctctggacg gctgcccccc aaaatatgcc  
1800  
aagaccttgt acctgctgta cgcacagctg gaggaggagt ggggcctggc ccggcatgcc  
1860  
atggccgtgt acgagcgtgc caccagggcc gtggagcccc cccagcagta tgacatgttc  
1920  
aacatctaca tcaagcgggc ggccgagatc tatgggggtca cccacaccg cggcattctac  
1980  
cagaaggcca ttgaggtgct gtcggacgag cacgcgcgtg agatgtgcct gcggtttgca  
2040  
gacatggagt gcaagctcgg ggagatcgac cgcgccccgg ctatctacag cttctgctcc  
2100  
cagatctgtg atccccggac aactggggca ttctggcaaa cgtggaagga ctttgaggtc  
2160  
cggcatggca acgaggacac catcaggag atgctgagga tacggcggag tgtgcaggcc  
2220  
acgtacaaca ctcagggtcaa cttcatggcc tcgcagatgc tcaagggtgc gggcagtgcc  
2280  
acgggcaccg tgtctgacct ggctccccgg cagagcggca tggatgacat gaagtgtgtg  
2340  
gaacagagag cagaacagct ggcggtgag gcggagcgtg accagccctt gcgcgcccag  
2400  
agcaagatcc tgttcgtgag gagtgcgcc tcccgggagg agctggcaga gctggcacag  
2460  
caggtaacc ccgaggagat ccagctgggc gaggacgagg acgaggacga gatggacctg  
2520  
gagcccaacg aggttcggct ggagcagcag agcgtgccag ccgcagtgtt tgggagcctg  
2580

aaggaagact gacccgtccc tcccccatcc cccctcccga cccctccccc aatacagcta  
 2640  
 cgtttgata tcaaaaaaaaa a  
 2661

<210> 4210  
 <211> 863  
 <212> PRT  
 <213> Homo sapiens

<400> 4210  
 Xaa Ser Cys Thr Trp Ala Ser Arg Lys Met Val Val Met Ala Arg Leu  
 1 5 10 15  
 Ser Arg Pro Glu Arg Pro Asp Leu Val Phe Glu Glu Glu Asp Leu Pro  
 20 25 30  
 Tyr Glu Glu Glu Ile Met Arg Asn Gln Phe Ser Val Lys Cys Trp Leu  
 35 40 45  
 Arg Tyr Ile Glu Phe Lys Gln Gly Ala Pro Lys Pro Arg Leu Asn Gln  
 50 55 60  
 Leu Tyr Glu Arg Ala Leu Lys Leu Leu Pro Cys Ser Tyr Lys Leu Trp  
 65 70 75 80  
 Tyr Arg Tyr Leu Lys Ala Arg Arg Ala Gln Val Lys His Arg Cys Val  
 85 90 95  
 Thr Asp Pro Ala Tyr Glu Asp Val Asn Asn Cys His Glu Arg Ala Phe  
 100 105 110  
 Val Phe Met His Lys Met Pro Arg Leu Trp Leu Asp Tyr Cys Gln Phe  
 115 120 125  
 Leu Met Asp Gln Gly Arg Val Thr His Thr Arg Arg Thr Phe Asp Arg  
 130 135 140  
 Ala Leu Arg Ala Leu Pro Ile Thr Gln His Ser Arg Ile Trp Pro Leu  
 145 150 155 160  
 Tyr Leu Arg Phe Leu Arg Ser His Pro Leu Pro Glu Thr Ala Val Arg  
 165 170 175  
 Gly Tyr Arg Arg Phe Leu Lys Leu Ser Pro Glu Ser Ala Glu Glu Tyr  
 180 185 190  
 Ile Glu Tyr Leu Lys Ser Ser Asp Arg Leu Asp Glu Ala Ala Gln Arg  
 195 200 205  
 Leu Ala Thr Val Val Asn Asp Glu Arg Phe Val Ser Lys Ala Gly Lys  
 210 215 220  
 Ser Asn Tyr Gln Leu Trp His Glu Leu Cys Asp Leu Ile Ser Gln Asn  
 225 230 235 240  
 Pro Asp Lys Val Gln Ser Leu Asn Val Asp Ala Ile Ile Arg Gly Gly  
 245 250 255  
 Leu Thr Arg Phe Thr Asp Gln Leu Gly Lys Leu Trp Cys Ser Leu Ala  
 260 265 270  
 Asp Tyr Tyr Ile Arg Ser Gly His Phe Glu Lys Ala Arg Asp Val Tyr  
 275 280 285  
 Glu Glu Ala Ile Arg Thr Val Met Thr Val Arg Asp Phe Thr Gln Val  
 290 295 300  
 Phe Asp Ser Tyr Ala Gln Phe Glu Glu Ser Met Ile Ala Ala Lys Met  
 305 310 315 320  
 Glu Thr Ala Ser Glu Leu Gly Arg Glu Glu Asp Asp Val Asp Leu  
 325 330 335  
 Glu Leu Arg Leu Ala Arg Phe Glu His Leu Ile Ser Arg Arg Pro Leu

3407

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      770              775              780
Glu Gln Leu Ala Ala Glu Ala Glu Arg Asp Gln Pro Leu Arg Ala Gln
785              790              795              800
Ser Lys Ile Leu Phe Val Arg Ser Asp Ala Ser Arg Glu Glu Leu Ala
      805              810              815
Glu Leu Ala Gln Gln Val Asn Pro Glu Glu Ile Gln Leu Gly Glu Asp
      820              825              830
Glu Asp Glu Asp Glu Met Asp Leu Glu Pro Asn Glu Val Arg Leu Glu
      835              840              845
Gln Gln Ser Val Pro Ala Ala Val Phe Gly Ser Leu Lys Glu Asp
      850              855              860

```

<210> 4211  
 <211> 456  
 <212> DNA  
 <213> Homo sapiens

```

<400> 4211
ggggatcgct agccccagc ttctcagaac taaatatgaa agctcttgct cgtctacgct
60
tagttacaac agactccctg ggcctactgt aggggtcaag agcagatttc cagactctca
120
agctggaaaa gagacgctcc aactgcgac gacaaccaac acatgggaca agctgagaaa
180
gtgcactcag gacttcgct gatgtcacca ccatggcaat acttagatcc tgttgcttaa
240
gcataccatg tcgctgaaag agggaaagaa aatgaaagag cgtcctttaa aaagacgtaa
300
aattacactt tcactactac tggttcctat ccttggtgcag taaagtacaa cctggccagg
360
gtttaccagc tctacctgca actgagtcag aaaggcaaag tagtcagctt tgtccatgct
420
gtacggaatt tgctccacaa acccccttgc tctaga
456

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<210> 4212  
 <211> 81  
 <212> PRT  
 <213> Homo sapiens

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<400> 4212
Met Leu Lys Gln Gln Asp Leu Ser Ile Ala Met Val Val Thr Ser Arg
1      5      10      15
Glu Val Leu Ser Ala Leu Ser Gln Leu Val Pro Cys Val Gly Cys Arg
      20      25      30
Arg Ser Val Glu Arg Leu Phe Ser Ser Leu Arg Val Trp Lys Ser Ala
      35      40      45
Leu Asp Pro Tyr Ser Arg Pro Arg Glu Ser Val Val Thr Lys Arg Arg
      50      55      60
Arg Ala Arg Ala Phe Ile Phe Ser Ser Glu Lys Leu Gly Ala Ser Asp
65      70      75      80
Pro

```



<210> 4213  
 <211> 383  
 <212> DNA  
 <213> Homo sapiens

<400> 4213  
 nacgcgtacc tgtgccagcg cgcgcgcttc ttcgcagaga acgagggcct agacgactac  
 60  
 atggaggcac gcgagggcat gcacctcaag aacgtggact tccgtgagtt catggtggcc  
 120  
 ttcccggacc cggcccggcc gccctggtac gcctgctcgt cggccttctg ggccgcggcg  
 180  
 ctgctcacgc tgtcgtggcc gctgcgagtg ctggccgagt accgcacggc ctacgcgcac  
 240  
 taccacgtgg agaagctggt tggcctggag ggcccgggt cggccagcag cgcaggcggt  
 300  
 ggctcagcc ccagcgatga gctgctgccc ccgctcacc accgcctgcc gcgggtcaac  
 360  
 acagtagaca gcacggagct cgg  
 383

<210> 4214  
 <211> 127  
 <212> PRT  
 <213> Homo sapiens

<400> 4214  
 Xaa Ala Tyr Leu Cys Gln Arg Ala Arg Phe Phe Ala Glu Asn Glu Gly  
 1 5 10 15  
 Leu Asp Asp Tyr Met Glu Ala Arg Glu Gly Met His Leu Lys Asn Val  
 20 25 30  
 Asp Phe Arg Glu Phe Met Val Ala Phe Pro Asp Pro Ala Arg Pro Pro  
 35 40 45  
 Trp Tyr Ala Cys Ser Ser Ala Phe Trp Ala Ala Ala Leu Leu Thr Leu  
 50 55 60  
 Ser Trp Pro Leu Arg Val Leu Ala Glu Tyr Arg Thr Ala Tyr Ala His  
 65 70 75 80  
 Tyr His Val Glu Lys Leu Phe Gly Leu Glu Gly Pro Gly Ser Ala Ser  
 85 90 95  
 Ser Ala Gly Gly Gly Leu Ser Pro Ser Asp Glu Leu Leu Pro Pro Leu  
 100 105 110  
 Thr His Arg Leu Pro Arg Val Asn Thr Val Asp Ser Thr Glu Leu  
 115 120 125

<210> 4215  
 <211> 939  
 <212> DNA  
 <213> Homo sapiens

<400> 4215  
 nggtacctcg gctgaataaa aattcaaaaa aacagcaatg gacaggaact tgagaagacg  
 60  
 ctggaagaaa gcaaagaaat ggatatcaaa cgtaaagaaa ataaaggcaa tgatacccct  
 120

ttggccctag agagtacaaa cactgaaaag gagacaagcc tggaggaaac aaaaatcggg  
 180  
 gagatcctga tccagggctt gacagaagat atggtgactg ttttaatccg ggcctgcgtg  
 240  
 agcatgctgg gagtcctgt ggaccagat actttgcatg ccaccctttg tttctgittg  
 300  
 agggtcactc ggggccccca attagccatg atgtttgcag aactgaagaa taccgcgatg  
 360  
 atcttgaatt tgaccagag ctcaggcttc aatgggttta ctcccctggc cacccttctc  
 420  
 ttaagacaca tcattgagga cccctgtacc ctctgcata ccatggaaaa ggttgttcgc  
 480  
 tcagcagcta caagtggagc tggtagcact acctctggtg ttgtgtctgg cagcctcggc  
 540  
 tctcgggaga tcaactacat ccttcgtgtc cttgggccag cgcgatgccg caatccagac  
 600  
 atattcacag aagtggccaa ctgctgtatc cgcctcggc ttctgcccc tcgaggctca  
 660  
 ggaactgctt cagatgatga atttgagaat cttagaatta aaggccctaa tgctgtacag  
 720  
 ctggtgaaga ccaccctttt gaagccctca cctctgcctg tcatccctga tactatcaag  
 780  
 gaagtgatct atgatatgct gaatgctctg gctgcatacc atgctccaga ggaagcagat  
 840  
 aaatctgatc ctaaacctgg gggttatgacc caagagggtg gccagctcct gcaagacatg  
 900  
 ggtgatgatg tataccagca gtaccgggtc cttacgcgt  
 939

&lt;210&gt; 4216

&lt;211&gt; 287

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4216

Met	Asp	Ile	Lys	Arg	Lys	Glu	Asn	Lys	Gly	Asn	Asp	Thr	Pro	Leu	Ala
1				5					10					15	
Leu	Glu	Ser	Thr	Asn	Thr	Glu	Lys	Glu	Thr	Ser	Leu	Glu	Glu	Thr	Lys
			20					25					30		
Ile	Gly	Glu	Ile	Leu	Ile	Gln	Gly	Leu	Thr	Glu	Asp	Met	Val	Thr	Val
		35				40					45				
Leu	Ile	Arg	Ala	Cys	Val	Ser	Met	Leu	Gly	Val	Pro	Val	Asp	Pro	Asp
	50				55					60					
Thr	Leu	His	Ala	Thr	Leu	Cys	Phe	Cys	Leu	Arg	Val	Thr	Arg	Gly	Pro
65					70				75					80	
Gln	Leu	Ala	Met	Met	Phe	Ala	Glu	Leu	Lys	Asn	Thr	Arg	Met	Ile	Leu
			85					90						95	
Asn	Leu	Thr	Gln	Ser	Ser	Gly	Phe	Asn	Gly	Phe	Thr	Pro	Leu	Val	Thr
		100				105						110			
Leu	Leu	Leu	Arg	His	Ile	Ile	Glu	Asp	Pro	Cys	Thr	Leu	Arg	His	Thr
		115				120					125				
Met	Glu	Lys	Val	Val	Arg	Ser	Ala	Ala	Thr	Ser	Gly	Ala	Gly	Ser	Thr
	130					135					140				
Thr	Ser	Gly	Val	Val	Ser	Gly	Ser	Leu	Gly	Ser	Arg	Glu	Ile	Asn	Tyr

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145          150          155          160
Ile Leu Arg Val Leu Gly Pro Ala Ala Cys Arg Asn Pro Asp Ile Phe
          165          170          175
Thr Glu Val Ala Asn Cys Cys Ile Arg Ile Ala Leu Pro Ala Pro Arg
          180          185          190
Gly Ser Gly Thr Ala Ser Asp Asp Glu Phe Glu Asn Leu Arg Ile Lys
          195          200          205
Gly Pro Asn Ala Val Gln Leu Val Lys Thr Thr Pro Leu Lys Pro Ser
          210          215          220
Pro Leu Pro Val Ile Pro Asp Thr Ile Lys Glu Val Ile Tyr Asp Met
          225          230          235          240
Leu Asn Ala Leu Ala Ala Tyr His Ala Pro Glu Glu Ala Asp Lys Ser
          245          250          255
Asp Pro Lys Pro Gly Val Met Thr Gln Glu Val Gly Gln Leu Leu Gln
          260          265          270Met Gly Asp Asp
Val Tyr Gln Gln Tyr Arg Ser Leu Thr Arg
          275          280          285

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&lt;210&gt; 4217

&lt;211&gt; 619

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4217

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acacacacac gcacacaaaa ctcagccaca ggctcaccag ggtctctctc aacatgcaca
60
catacacaca cacacccttc agtcataggc tcacaagagt ctctcttgtc tctctctcat
120
acatacacac acacacacaa ccagccacag gccacaaaag gtgtctctct ctttgtccct
180
gtctgtctct tcgcactcac acacacacat ctcagccaca ggcccaccag agtctgtctg
240
tctctttgtc tctctcactc tctctcacac acatacacct cagccacagg cccacaaggg
300
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360
agccacaggc ccacgagggg gtctctctct ctctctctct ctcacacaca cacacacaca
420
cacacacgcc tgtgcagctc cacagggggc tggggcagga gacagatctg aatacacata
480
ccaccctgtg ctgtgagtgg ccactcccat ccaacaactg agactttctg ttactggggc
540
aaggttttct gccaaactca cttcccttat aatgaatgaa ttatccctca gaaggttcca
600
cagtcctccc ctggcgcg
619

```

&lt;210&gt; 4218

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4218

Met His Thr Tyr Thr His Thr Pro Leu Ser His Arg Leu Thr Arg Val

1                      5                      10                      15  
 Ser Leu Val Ser Leu Ser Tyr Ile His Thr His Thr Gln Pro Ala Thr  
                     20                      25                      30  
 Gly Pro Gln Arg Cys Leu Ser Leu Cys Pro Cys Leu Leu Ser Arg Thr  
                     35                      40                      45  
 His Thr His Thr Ser Gln Pro Gln Ala His Gln Ser Leu Ser Val Ser  
                     50                      55                      60  
 Leu Ser Leu Ser Leu Ser Leu Thr His Ile His Leu Ser His Arg Pro  
 65                      70                      75                      80  
 Thr Arg Val Ser Leu Leu Val Pro Gly Ser Ser Leu Ser His Thr Pro  
                     85                      90                      95  
 Thr His Thr His Thr Ala Gln Pro Gln Ala His Glu Gly Val Ser Leu  
                     100                      105                      110  
 Ser Leu Ser Leu Ser His Thr His Thr His Thr His Thr Pro Val Gln  
                     115                      120                      125  
 Leu His Arg Gly Leu Gly Gln Glu Thr Asp Leu Asn Thr His Thr Thr  
                     130                      135                      140  
 Leu Cys Cys Glu Trp Pro Leu Pro Ser Asn Asn  
 145                      150                      155

&lt;210&gt; 4219

&lt;211&gt; 774

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4219

ngcggccgcg cacctgctcc cgctgcccta cagcaagatc acgccccgcg ggaggcccca  
 60  
 ccgctgcagc agcggccacg gcagcgacaa cagcagcgtg ctgagcgggg agctccccgc  
 120  
 ggccatgggg aagacggccc tgttctacca cagcggcggc agcagcggct acgagagcgt  
 180  
 gatgcgggac agcagaggcca ccggcagcgc gtcctcggcg caggactcca cgagcgagaa  
 240  
 cagcagctcc gtggggcgga ggtgccggag cctcaagacc ccgaagaaac gctccaatcc  
 300  
 aggttctcag agacggaggc ttatcccagc actatccctg gacacctctt cccctgtgag  
 360  
 aaaaccccc aacagcacag gcgtccgctg ggtggatggn nccccctgcg gagcagcccc  
 420  
 aggggccttg gggaaacctt gagattaaag tctnatgaaa tcgatgacgt ggagcgcttg  
 480  
 cagcggcgac gagggggtgc cagcaaggag gccatgtgct tcaatgcaaa gctgaagatt  
 540  
 ctggaacacc gccagcagag gatcgccgag gtccgcgcga agtacgagtg gctgatgaag  
 600  
 gagctggagg cgaccaaaca gtatctgatg ctggatccca acaagtggct cagtgaattt  
 660  
 gacttggagc aggtttggga gctggattcc ctggagtacc tggaggcact ggagtgtgtg  
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&lt;210&gt; 4220

<211> 258  
 <212> PRT  
 <213> Homo sapiens

<400> 4220

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      20           25           30
Arg Ala Glu Arg Gly Ala Pro Ala Gly His Gly Glu Asp Gly Pro Val
      35           40           45
Leu Pro Gln Arg Arg Gln Gln Arg Leu Arg Glu Arg Asp Ala Gly Gln
      50           55           60
Arg Gly His Arg Gln Arg Val Leu Gly Ala Gly Leu His Glu Arg Glu
      65           70           75
Gln Gln Leu Arg Gly Arg Gln Val Pro Glu Pro Gln Asp Pro Glu Glu
      85           90           95
Thr Leu Gln Ser Arg Phe Ser Glu Thr Glu Ala Tyr Pro Ser Thr Ile
      100          105          110
Pro Gly His Leu Phe Pro Cys Glu Lys Thr Pro Gln Gln His Arg Arg
      115          120          125
Pro Leu Gly Gly Trp Xaa Pro Leu Arg Ser Ser Pro Arg Gly Leu Gly
      130          135          140
Glu Pro Leu Arg Leu Lys Ser Xaa Glu Ile Asp Asp Val Glu Arg Leu
      145          150          155
Gln Arg Arg Arg Gly Gly Ala Ser Lys Glu Ala Met Cys Phe Asn Ala
      165          170          175
Lys Leu Lys Ile Leu Glu His Arg Gln Gln Arg Ile Ala Glu Val Arg
      180          185          190
Ala Lys Tyr Glu Trp Leu Met Lys Glu Leu Glu Ala Thr Lys Gln Tyr
      195          200          205
Leu Met Leu Asp Pro Asn Lys Trp Leu Ser Glu Phe Asp Leu Glu Gln
      210          215          220
Val Trp Glu Leu Asp Ser Leu Glu Tyr Leu Glu Ala Leu Glu Cys Val
      225          230          235
Thr Glu Arg Leu Glu Ser Arg Val Asn Phe Cys Lys Ala His Leu Met
      245          250          255
Met Leu

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<210> 4221  
 <211> 789  
 <212> DNA  
 <213> Homo sapiens

<400> 4221

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120
gaagcttcaa actgtataaaa tttaaattgta tttgcatatt ataaaaataa agataaacat
180
atacatatttt tacactagtt atggaacagc aatgaacgtc agtcgatccc tctttcacat
240

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ttaacagaac tgaaatctga gtgctctaaa tactgccacc tgtactgtaa ctatggctta  
 300  
 tatgtgcacg gaaaacaaaa tccctgagaa gccattcgac tttttttttt tttcttttct  
 360  
 tcaagtagcg cgctccttgg aggatcacag ttctgaggtt caggttgtaa aacatttgct  
 420  
 ccatgttctc gtccatgctt cccccacca cccctcccc acctcttccc cagtcgtcca  
 480  
 aaaagcacc tgcaagcacg cgttgtcact caagttcaca gaacacgctg gggtagtggc  
 540  
 agaggggtctg ccaggtgcaa aagatgggtc aggtgttcag atgctctctt ttctccatgg  
 600  
 aaattccaca gccacaaacg tcaactgggtt ctgtgctttt caccaacatt cttcccttaa  
 660  
 aaattgggtgc tcctaaagtc acagtttggg tacagtaaaa atgatggcat aaggaaaaga  
 720  
 agcactatct tttccactta attttccaag aaagtatgaa gataacttga acaggggctg  
 780  
 atcacagtc  
 789

<210> 4222

<211> 127

<212> PRT

<213> Homo sapiens

<400> 4222

Met	Ala	Tyr	Met	Cys	Thr	Glu	Asn	Lys	Ile	Pro	Glu	Lys	Pro	Phe	Asp
1				5					10					15	
Phe	Phe	Phe	Phe	Ser	Phe	Leu	Gln	Val	Ala	Arg	Ser	Leu	Glu	Asp	His
			20					25					30		
Ser	Ser	Glu	Val	Gln	Val	Val	Lys	His	Leu	Leu	His	Val	Leu	Val	His
		35					40					45			
Ala	Ser	Pro	His	His	Pro	Leu	Pro	Thr	Ser	Ser	Pro	Val	Val	Gln	Lys
	50					55					60				
Ala	Pro	Cys	Lys	His	Ala	Leu	Ser	Leu	Lys	Phe	Thr	Glu	His	Ala	Gly
65					70					75				80	
Val	Ser	Ala	Glu	Gly	Leu	Pro	Gly	Ala	Lys	Asp	Gly	Pro	Gly	Val	Gln
			85						90					95	
Met	Leu	Ser	Phe	Leu	His	Gly	Asn	Ser	Thr	Ala	Thr	Asn	Val	Thr	Gly
			100						105				110		
Phe	Cys	Ala	Phe	His	Gln	His	Ser	Ser	Leu	Lys	Asn	Trp	Cys	Ser	
		115					120					125			

<210> 4223

<211> 852

<212> DNA

<213> Homo sapiens

<400> 4223

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 gaggccgtgg cctatttgca ctcaactcaag atcgtgcaca ggaatctcaa gctggagaac  
 120

ctggtttact acaaccggct gaagaactcg aagattgtca tcagtgactt ccatctggct  
 180  
 aagctagaaa atggcctcat caaggagccc tgtgggaccc ccgaagattt tgccccccaa  
 240  
 ggggaaggcc ggcagcggta tggacgccct gtggactgct gggccattgg agtcatcatg  
 300  
 tacatcctgc tttcaggcaa tccacctttc tatgaggagg tggaagaaga tgattatgag  
 360  
 aacctgata agaattctctt ccgcaagatc ctggctgggtg actatgagtt tgactctcca  
 420  
 tattgggatg atatttcgca ggcagccaaa gacctgggtca caaggctgat ggaggtggag  
 480  
 caagaccagc ggatcactgc agaagaggcc atctcccatg agtggatttc tggcaatgct  
 540  
 gcttctgata agaacatcaa ggatgggtgtc tgtgcccaga ttgaaaagaa ctttgccagg  
 600  
 gccaaagtga agaaggctgt ccgagtgacc accctcatga aacggctccg ggcaccagag  
 660  
 cagtccagca cggctgcagc ccagtcggcc tcagccacag aactgccac ccccggggct  
 720  
 gcagaccgta gtgccacccc agccacagat ggaagtgcc cccagccac tgatggcagt  
 780  
 gtcaccccag ccaccgatgg aagcatcact ccagccattg atgggagtg caccacagcc  
 840  
 actgacagga gc  
 852

&lt;210&gt; 4224

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4224

Ile	Leu	Asp	Gln	Gly	Tyr	Tyr	Ser	Glu	Arg	Asp	Thr	Ser	Asn	Val	Val
1				5					10					15	
Arg	Gln	Val	Leu	Glu	Ala	Val	Ala	Tyr	Leu	His	Ser	Leu	Lys	Ile	Val
		20						25					30		
His	Arg	Asn	Leu	Lys	Leu	Glu	Asn	Leu	Val	Tyr	Tyr	Asn	Arg	Leu	Lys
		35					40					45			
Asn	Ser	Lys	Ile	Val	Ile	Ser	Asp	Phe	His	Leu	Ala	Lys	Leu	Glu	Asn
		50				55				60					
Gly	Leu	Ile	Lys	Glu	Pro	Cys	Gly	Thr	Pro	Glu	Asp	Phe	Ala	Pro	Gln
65				70					75					80	
Gly	Glu	Gly	Arg	Gln	Arg	Tyr	Gly	Arg	Pro	Val	Asp	Cys	Trp	Ala	Ile
			85					90					95		
Gly	Val	Ile	Met	Tyr	Ile	Leu	Leu	Ser	Gly	Asn	Pro	Pro	Phe	Tyr	Glu
		100						105					110		
Glu	Val	Glu	Glu	Asp	Asp	Tyr	Glu	Asn	His	Asp	Lys	Asn	Leu	Phe	Arg
		115				120					125				
Lys	Ile	Leu	Ala	Gly	Asp	Tyr	Glu	Phe	Asp	Ser	Pro	Tyr	Trp	Asp	Asp
		130				135					140				
Ile	Ser	Gln	Ala	Ala	Lys	Asp	Leu	Val	Thr	Arg	Leu	Met	Glu	Val	Glu
145					150					155				160	
Gln	Asp	Gln	Arg	Ile	Thr	Ala	Glu	Glu	Ala	Ile	Ser	His	Glu	Trp	Ile

165 170 175  
 Ser Gly Asn Ala Ala Ser Asp Lys Asn Ile Lys Asp Gly Val Cys Ala  
 180 185 190  
 Gln Ile Glu Lys Asn Phe Ala Arg Ala Lys Trp Lys Lys Ala Val Arg  
 195 200 205  
 Val Thr Thr Leu Met Lys Arg Leu Arg Ala Pro Glu Gln Ser Ser Thr  
 210 215 220  
 Ala Ala Ala Gln Ser Ala Ser Ala Thr Asp Thr Ala Thr Pro Gly Ala  
 225 230 235 240  
 Ala Asp Arg Ser Ala Thr Pro Ala Thr Asp Gly Ser Ala Thr Pro Ala  
 245 250 255  
 Thr Asp Gly Ser Val Thr Pro Ala Thr Asp Gly Ser Ile Thr Pro Ala  
 260 265 270  
 Ile Asp Gly Ser Val Thr Pro Ala Thr Asp Arg Ser  
 275 280

&lt;210&gt; 4225

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4225

nntgtacaag aaagtgagcc agtcatcgtc aatattcaag tgatggatgc aaatgataac  
 60  
 acgccaacct tccctgaaat atcctatgat gtgtatgttt atacagacat gagacctggg  
 120  
 gacagggtcc tacagttaac tgcagtcgac gcagacgaag ggtcaaatgg ggagatcaca  
 180  
 tatgaaatcc ttgttggggc tcagggagac ttcatcatca ataaaacaac agggcttatc  
 240  
 accatcgctc caggggtgga aatgatagtc gggcggactt acgcactccc ggtccaagca  
 300  
 gcggataatg ctctcctgc aaagcaaagg actcccatct gcactgtgta tattgaagtg  
 360  
 cttccaccaa ataatcaaag ccctcctgc ttcccacagc tgatgtatag ccttgaaatt  
 420  
 agtgaagcca tgagggttgg tgctgtttta ttaaacttac aggcaactga  
 470

&lt;210&gt; 4226

&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4226

Xaa Val Gln Glu Ser Glu Pro Val Ile Val Asn Ile Gln Val Met Asp  
 1 5 10 15  
 Ala Asn Asp Asn Thr Pro Thr Phe Pro Glu Ile Ser Tyr Asp Val Tyr  
 20 25 30  
 Val Tyr Thr Asp Met Arg Pro Gly Asp Arg Val Leu Gln Leu Thr Ala  
 35 40 45  
 Val Asp Ala Asp Glu Gly Ser Asn Gly Glu Ile Thr Tyr Glu Ile Leu  
 50 55 60  
 Val Gly Ala Gln Gly Asp Phe Ile Ile Asn Lys Thr Thr Gly Leu Ile



```

65          70          75          80
Thr Ile Ala Pro Gly Val Glu Met Ile Val Gly Arg Thr Tyr Ala Leu
          85          90          95
Pro Val Gln Ala Ala Asp Asn Ala Pro Pro Ala Lys Gln Arg Thr Pro
          100          105          110
Ile Cys Thr Val Tyr Ile Glu Val Leu Pro Pro Asn Asn Gln Ser Pro
          115          120          125
Pro Arg Phe Pro Gln Leu Met Tyr Ser Leu Glu Ile Ser Glu Ala Met
          130          135          140
Arg Val Gly Ala Val Leu Leu Asn Leu Gln Ala Thr
145          150          155

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&lt;210&gt; 4227

&lt;211&gt; 1199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4227

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60
attataaatt taacttctaa catgttttat ggttaaaatt gtactttttt ccttttagcga
120
cattcaaagt catcacaatc actttgtgaa attgttcgcc tgagcagaga ccagatgtta
180
caaattcaga acagtacaga gcccgacccc ctgcttgcca ctctagaaaa gcaagaaatt
240
atagagcagc ttctatcaaa tttttccac aaggagaaaa atgagtcagc catagtcagt
300
gcaatccaga tattgctgac tttacttgag acacgacgac caacatttga aggccatata
360
gagatctgcc caccaggcat gagccattca gcttggtcag taaacaagag tgttctagaa
420
gccatcagag gaagacttgg atcttttcat gaactcctgc tggagccacc caagaaaagt
480
gtgatgaaga ccacatgggg tgtgctggat cctcctgtgg ggaatacccg gttgaatgtc
540
attaggttga tatccagcct gcttcaaacc aataccagca gtataaatgg ggaccttatg
600
gagctgaata gcattggagt catattgaac atgttcttca agtatacatg gaataacttt
660
ttgcatacac aagtggaaat ttgtattgca ctgattcttg caagtccctt tgaaaacaca
720
gaaaatgcca caattaccga tcaagactcc actggtgata atttgttatt aaaacatctt
780
ttcaaaaaat gtcaattaat agaacgaata cttgaagcct gggaaatgaa tgagaagaaa
840
caggtgagg gaggaagacg gcatggttac atgggacacc taacgaggat agctaactgt
900
atcgtgcaca gactgacaa gggccccaac agtgcattag tgcagcagct tatcaaaggt
960
aagttatttg tgaaatttga attacatttt tgttgggttg caggaaggat ttaagggtca
1020
agtagaaatg catgtagcat ttttaatagt gatttgtggg acttctttat atttggcaaa
1080

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ttatgtattt gaatgaggtt cttgagaatg tgtttgaaca ggggttgttt ttgggttgta  
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 1199

<210> 4228

<211> 298

<212> PRT

<213> Homo sapiens

<400> 4228

Arg	His	Ser	Asn	Ala	Ser	Gln	Ser	Leu	Cys	Glu	Ile	Val	Arg	Leu	Ser
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Arg	Asp	Gln	Met	Leu	Gln	Ile	Gln	Asn	Ser	Thr	Glu	Pro	Asp	Pro	Leu
			20					25					30		
Leu	Ala	Thr	Leu	Glu	Lys	Gln	Glu	Ile	Ile	Glu	Gln	Leu	Leu	Ser	Asn
			35					40					45		
Ile	Phe	His	Lys	Glu	Lys	Asn	Glu	Ser	Ala	Ile	Val	Ser	Ala	Ile	Gln
			50			55					60				
Ile	Leu	Leu	Thr	Leu	Leu	Glu	Thr	Arg	Arg	Pro	Thr	Phe	Glu	Gly	His
65						70				75					80
Ile	Glu	Ile	Cys	Pro	Pro	Gly	Met	Ser	His	Ser	Ala	Cys	Ser	Val	Asn
			85						90					95	
Lys	Ser	Val	Leu	Glu	Ala	Ile	Arg	Gly	Arg	Leu	Gly	Ser	Phe	His	Glu
			100					105						110	
Leu	Leu	Leu	Glu	Pro	Pro	Lys	Lys	Ser	Val	Met	Lys	Thr	Thr	Trp	Gly
			115					120					125		
Val	Leu	Asp	Pro	Pro	Val	Gly	Asn	Thr	Arg	Leu	Asn	Val	Ile	Arg	Leu
			130				135					140			
Ile	Ser	Ser	Leu	Leu	Gln	Thr	Asn	Thr	Ser	Ser	Ile	Asn	Gly	Asp	Leu
145					150					155					160
Met	Glu	Leu	Asn	Ser	Ile	Gly	Val	Ile	Leu	Asn	Met	Phe	Phe	Lys	Tyr
			165						170					175	
Thr	Trp	Asn	Asn	Phe	Leu	His	Thr	Gln	Val	Glu	Ile	Cys	Ile	Ala	Leu
			180					185						190	
Ile	Leu	Ala	Ser	Pro	Phe	Glu	Asn	Thr	Glu	Asn	Ala	Thr	Ile	Thr	Asp
			195					200					205		
Gln	Asp	Ser	Thr	Gly	Asp	Asn	Leu	Leu	Leu	Lys	His	Leu	Phe	Gln	Lys
			210			215					220				
Cys	Gln	Leu	Ile	Glu	Arg	Ile	Leu	Glu	Ala	Trp	Glu	Met	Asn	Glu	Lys
225					230					235				240	
Lys	Gln	Ala	Glu	Gly	Gly	Arg	Arg	His	Gly	Tyr	Met	Gly	His	Leu	Thr
			245						250					255	
Arg	Ile	Ala	Asn	Cys	Ile	Val	His	Ser	Thr	Asp	Lys	Gly	Pro	Asn	Ser
			260					265						270	
Ala	Leu	Val	Gln	Gln	Leu	Ile	Lys	Gly	Lys	Leu	Phe	Val	Lys	Phe	Glu
			275				280					285			
Leu	His	Phe	Cys	Trp	Val	Ala	Gly	Arg	Ile						
			290				295								

<210> 4229

<211> 1612

<212> DNA

<213> Homo sapiens

<400> 4229  
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 120  
 ggaaacatga agtcggctct cacctggaag caccggaagg agcacgcat cccccacgtg  
 180  
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 300  
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 720  
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 1560

gccttccaga agcagggtccc aaataaagcc agtgcccacc tgaaaaaaaa aa  
1612

<210> 4230

<211> 417

<212> PRT

<213> Homo sapiens

<400> 4230

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Leu	Glu	Gly	Arg	Ser	Gln	Ser	Pro	Val	Ala	Leu	Leu	Phe	Asp	Ala	Leu
			20					25					30		
Leu	Arg	Pro	Asp	Thr	Asp	Phe	Gly	Gly	Asn	Met	Lys	Ser	Val	Leu	Thr
		35					40					45			
Trp	Lys	His	Arg	Lys	Glu	His	Ala	Ile	Pro	His	Val	Val	Leu	Gly	Arg
	50					55					60				
Asn	Leu	Pro	Gly	Gly	Ala	Trp	His	Ser	Ile	Glu	Gly	Ser	Met	Val	Ile
65					70					75				80	
Leu	Ser	Gln	Gly	Gln	Trp	Met	Gly	Leu	Pro	Asp	Leu	Glu	Val	Lys	Asp
				85					90					95	
Trp	Met	Gln	Lys	Lys	Arg	Arg	Gly	Leu	Arg	Asn	Ser	Arg	Ala	Thr	Ala
		100						105					110		
Gly	Asp	Ile	Ala	His	Tyr	Tyr	Arg	Asp	Tyr	Val	Val	Lys	Lys	Gly	Leu
	115						120					125			
Gly	His	Asn	Phe	Val	Ser	Gly	Ala	Val	Val	Thr	Ala	Val	Glu	Trp	Gly
	130					135					140				
Thr	Pro	Asp	Pro	Ser	Ser	Cys	Gly	Ala	Gln	Asp	Ser	Ser	Pro	Leu	Phe
145					150					155				160	
Gln	Val	Ser	Gly	Phe	Leu	Thr	Arg	Asn	Gln	Ala	Gln	Gln	Pro	Phe	Ser
			165						170					175	
Leu	Trp	Ala	Arg	Asn	Val	Val	Leu	Ala	Thr	Gly	Thr	Phe	Asp	Ser	Pro
		180						185					190		
Ala	Arg	Leu	Gly	Ile	Pro	Gly	Glu	Ala	Leu	Pro	Phe	Ile	His	His	Glu
	195						200					205			
Leu	Ser	Ala	Leu	Glu	Ala	Ala	Thr	Arg	Val	Gly	Ala	Val	Thr	Pro	Ala
	210					215					220				
Ser	Asp	Pro	Val	Leu	Ile	Ile	Gly	Ala	Gly	Leu	Ser	Ala	Ala	Asp	Ala
225					230					235				240	
Val	Leu	Tyr	Ala	Arg	His	Tyr	Asn	Ile	Pro	Val	Ile	His	Ala	Phe	Arg
			245						250					255	
Arg	Ala	Val	Asp	Asp	Pro	Gly	Leu	Val	Phe	Asn	Gln	Leu	Pro	Lys	Met
		260						265					270		
Leu	Tyr	Pro	Glu	Tyr	His	Lys	Val	His	Gln	Met	Met	Arg	Glu	Gln	Ser
	275						280					285			
Ile	Leu	Ser	Pro	Ser	Pro	Tyr	Glu	Gly	Tyr	Arg	Ser	Leu	Pro	Arg	His
	290					295					300				
Gln	Leu	Leu	Cys	Phe	Lys	Glu	Asp	Cys	Gln	Ala	Val	Phe	Gln	Asp	Leu
305					310					315				320	
Glu	Gly	Val	Glu	Lys	Val	Phe	Gly	Val	Ser	Leu	Val	Leu	Val	Leu	Ile
			325						330				335		
Gly	Ser	His	Pro	Asp	Leu	Ser	Phe	Leu	Pro	Gly	Ala	Gly	Ala	Asp	Phe
		340						345				350			
Ala	Val	Asp	Pro	Asp	Gln	Pro	Leu	Ser	Ala	Lys	Arg	Asn	Pro	Ile	Asp

	355		360		365										
Val	Asp	Pro	Phe	Thr	Tyr	Gln	Ser	Thr	Arg	Gln	Glu	Gly	Leu	Tyr	Ala
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Pro															

&lt;210&gt; 4231

&lt;211&gt; 1588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4231

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<210> 4232

<211> 434

<212> PRT

<213> Homo sapiens

<400> 4232

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Glu	Glu	Lys	Lys	Ile	Leu	Ala	Ile	Glu	Leu	Glu	Asn	Leu	Lys	Ser	Lys
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Val	Leu	Asn	Ser	Glu	Val	Leu	Glu	Gln	Arg	Lys	Val	Leu	Glu	Lys	Cys
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Gln	Glu	Met	Phe	Leu	Glu	Pro	Asn	Gln	Gly	Lys	Lys	Thr	Lys	Pro	Pro
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&lt;210&gt; 4233

&lt;211&gt; 2827

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4233

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<210> 4234

<211> 833

<212> PRT

<213> Homo sapiens

<400> 4234

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Thr	Cys	Lys	Val	His	Thr	Ser	Pro	Pro	Met	Tyr	Ser	Leu	Asp	Arg	Ile
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Phe	Ala	Gly	Phe	Arg	Thr	Arg	Ser	Gln	Met	Leu	Leu	Gly	His	Ile	Glu
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Glu	Gln	Asp	Lys	Val	Leu	His	Cys	Gln	Phe	Ser	Asp	Asn	Ser	Asp	Asp
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Glu	Glu	Ser	Glu	Gly	Gln	Glu	Lys	Ser	Gly	Thr	Arg	Cys	Arg	Ser	Arg
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Ser	Trp	Ile	Gln	Lys	Pro	Asp	Ser	Val	Cys	Ser	Leu	Val	Glu	Leu	Ser
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Asp	Thr	Gln	Asp	Glu	Thr	Gln	Lys	Ser	Asp	Leu	Glu	Asn	Glu	Asp	Leu
		115					120					125			
Lys	Ile	Asp	Cys	Leu	Gln	Glu	Ser	Gln	Glu	Leu	Asn	Leu	Gln	Lys	Leu
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Lys	Asn	Ser	Glu	Arg	Ile	Leu	Thr	Glu	Ala	Lys	Gln	Lys	Met	Arg	Glu
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Leu	Thr	Val	Asn	Ile	Lys	Met	Lys	Glu	Asp	Leu	Ile	Lys	Glu	Leu	Ile
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Lys	Thr	Gly	Asn	Asp	Ala	Lys	Ser	Val	Ser	Lys	Gln	Tyr	Thr	Leu	Lys
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Val	Thr	Lys	Leu	Glu	His	Asp	Ala	Glu	Gln	Ala	Lys	Val	Glu	Leu	Thr
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Lys Lys Leu Ala Ser Leu Ser Ile Gln Asn Glu Lys Arg Ala Asn Glu		255
	260	265
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	275	280
Arg Lys Leu Arg Glu Glu Asn Glu Lys Arg Lys Gln Leu Asp Ala Val		285
	290	295
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Gln Glu Glu Gly Leu Lys Pro Lys Ala Glu Asp Leu Asp Ala Cys Asn		320
	325	330
Leu Lys Arg Arg Lys Gly Ser Phe Gly Ser Ile Asp His Leu Gln Lys		335
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	370	375
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385	390	395
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	405	410
Leu Lys Ile Ser Thr Arg Leu Asn Leu Leu Glu Gln Glu Leu Ser Glu		415
	420	425
Lys Asn Val Gln Leu Gln Thr Ser Thr Ala Glu Glu Lys Thr Lys Ile		430
	435	440
Ser Glu Gln Val Glu Val Leu Gln Lys Glu Lys Asp Gln Leu Gln Lys		445
	450	455
Arg Arg His Asp Val Asp Glu Lys Leu Lys Asn Gly Arg Val Leu Ser		460
465	470	475
Pro Glu Glu Glu His Val Leu Phe Gln Leu Glu Glu Gly Ile Glu Ala		480
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Lys Ser Leu Arg Ala Ser Phe His Asn Leu Ser Arg Gly Glu Ala Asn		510
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Val Leu Glu Lys Leu Ala Cys Leu Ser Pro Val Glu Ile Arg Thr Ile		525
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Leu Phe Arg Tyr Phe Asn Lys Val Val Asn Leu Arg Glu Ala Glu Arg		540
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Lys Gln Gln Leu Tyr Asn Glu Glu Met Lys Met Lys Val Leu Glu Arg		560
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	580	585
Gln Cys Asp Arg Arg Leu Thr Leu Gln Gln Lys Glu His Glu Gln Lys		590
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Met Gln Leu Leu Leu His His Phe Lys Glu Gln Asp Gly Glu Gly Ile		605
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Met Glu Thr Phe Lys Thr Tyr Glu Asp Lys Ile Gln Gln Leu Glu Lys		620
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Asp Leu Tyr Phe Tyr Lys Lys Thr Ser Arg Asp His Lys Lys Lys Leu		640

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 690 695 700  
 Ser Gly Arg Glu Arg Glu Met Asp Ser Ser Ala Ser Ser Leu Arg Thr  
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 785 790 795 800  
 Leu Glu Leu Ser Leu Arg Arg Ser Ser Leu Gly Val Gly Ile Gly Ser  
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&lt;210&gt; 4235

&lt;211&gt; 971

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4235

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 35 40 45  
 Thr Thr Thr Ile Thr Ser Gly Phe Thr Val Asn Gln Asn Gln Leu Leu  
 50 55 60  
 Ser Arg Gly Phe Glu Asn Leu Val Pro Tyr Thr Ser Thr Val Ser Val  
 65 70 75 80  
 Val Ala Thr Pro Val Met Thr Tyr Gly His Leu Glu Gly Leu Ile Asn  
 85 90 95  
 Glu Trp Asn Leu Glu Leu Glu Asp Gln Glu Lys Tyr Phe Leu Leu Gln  
 100 105 110  
 Ala Thr Gln Val Asn Ala Trp Asp His Thr Leu Ile Glu Asn Gly Glu  
 115 120 125  
 Met Ile Arg Ile Leu His Gly Glu Val Asn Lys Val Lys Leu Asp Gln  
 130 135 140  
 Lys Arg Leu Glu Gln Glu Leu Asp Phe Ile Leu Ser Gln Gln Gln Glu  
 145 150 155 160  
 Leu Glu Phe Leu Leu Thr Tyr Leu Glu Glu Ser Thr Arg Asp Gln Ser  
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 Gly Leu His Tyr Leu Gln Asp Ala Asp Glu Glu His Val Glu Ile Ser  
 180 185 190  
 Thr Arg Ser Ala Glu Phe  
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<210> 4237  
 <211> 560  
 <212> DNA  
 <213> Homo sapiens

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 <212> PRT  
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 Phe Leu Asp Ser Leu Ser Cys Phe Leu Asp Ser Leu Gln Ile Ala Arg  
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 65 70 75 80  
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&lt;210&gt; 4240

&lt;211&gt; 860

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4240

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Thr	Phe	Glu	Ala	Thr	Gln	Asp
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Pro	Ala	Tyr	Ala	Arg	Ser	Asp
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Pro	Arg	Pro	Ser	Ile	Lys	Lys
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Ala	Gln	Glu	Ala	Gly	Pro	Lys
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Asp	Pro	Pro	Gly	Leu	Glu	Ala
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Gly	Pro	Leu	Glu	Asp	Thr	Pro
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Glu	Val	Asp	Pro	Ile	Arg	Lys
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Glu	Glu	Arg	Pro	Pro	Arg	Asp
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Leu	Asp	Ser	Ser	Pro	Glu	Lys
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Lys	Leu	Ser	Ser	Thr	Asp	Leu
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Ile	Pro	Arg	Glu	Val	Ser	Glu
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Leu	Ile	Arg	Asp	Ser	Leu	Thr
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Lys	Ala	Gly	Glu	Ser	Tyr	Thr
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Ser	Phe	Asp	His	Val	Pro	Ala
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Arg	Thr	Phe	Pro	Leu	Arg	Tyr
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Gly	Ser	Ser	Lys	Pro	Ala	Ser
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Ser	His	Met	Lys	Arg	Arg	Ser
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Asp	Lys	Val	Thr	Arg	Ser	Asp
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Arg	Pro	Arg	Asp	Ser	Ile	Arg
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Pro	Asp	Leu	His	Ser	Pro	Met
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Thr Ser Ser Gln Gln Ala Arg Ser Tyr Gly Glu Arg Leu Lys Glu Leu		510
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Ser Glu Asn Gly Ala Pro Glu Gly Asp Trp Gly Lys Thr Phe Thr Val		525
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His Val Thr Lys Val Asp Cys Leu Val Ala Arg Ile Leu Gly Val Thr		590
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Val Thr Leu Arg Gln Arg His Thr Glu Gly Ala Ile Leu Tyr Glu Lys		
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	725	730
Pro Leu Ser Asn Thr Thr Phe Pro His Val Leu Pro Leu Ile Thr Leu		735
	740	745
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	755	760
Thr Glu His Gly Val Glu Val Val Leu Ala His Leu Glu Ala Ala Arg		765
770	775	780
Thr Val Ala His His Gly Gly Leu Tyr His Thr Asn Ala Glu Val Lys		
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Leu Gln Gly Phe Gln Ala Arg Pro Glu Leu Leu Glu Val Phe Ser Thr		800
	805	810
Glu Phe Gln Met Arg Leu Leu Trp Gly Ser Gln Gly Ala Ser Ser Ser		815
	820	825
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 Gln Ala Leu Ser His Phe Gln Val Ile Val Val Ser Asn Ile Ala Ser  
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 Lys Met Glu His Met Val Ser Ser Phe Cys Leu Lys Arg Cys Arg Ser  
 100 105 110  
 Ala Gln Val Leu His Leu Tyr Gly Ala Thr Tyr Ser Ala Asp Gly Glu  
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<400> 4244

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Asn Ile Tyr Thr Phe Asn His Thr Val Thr Arg Asn Arg Thr Glu Gly
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Val Arg Val Ser Val Asn Val Leu Asn Lys Gln Lys Gly Ala Pro Leu
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Leu Ser Asn Leu Gly Tyr Ile Leu Leu Gly Leu Leu Phe Leu Leu Ile
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Ile Lys Leu Ile Pro Leu Leu Cys Ile Val Cys Thr Ser Val Val Trp
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Gly Phe Ala Leu Phe Phe Phe Gln Gly Leu Ser Thr Trp Gln Lys
785      790      795      800
Thr Pro Ala Glu Ser Arg Glu His Asn Arg Asp Cys Ile Leu Leu Asp

```

	805		810		815										
Phe	Phe	Asp	Asp	His	Asp	Ile	Trp	His	Phe	Leu	Ser	Ser	Ile	Ala	Met
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Thr															

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 <211> 909  
 <212> DNA  
 <213> Homo sapiens

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Asn Ala Gly Glu Glu Cys Lys Ser Leu Arg Gly Gln Leu Glu Gln			
35	40	45	
Gly Arg Gln Leu Gln Ala Ala Glu Glu Ala Val Glu Lys Leu Lys Ala			
50	55	60	
Thr Gln Ala Asp Met Gly Glu Lys Leu Ser Cys Thr Ser Asn His Leu			
65	70	75	80
Ala Glu Cys Gln Ala Ala Met Leu Arg Lys Asp Lys Glu Gly Ala Ala			
85	90	95	
Leu Arg Glu Asp Leu Glu Arg Thr Gln Lys Glu Leu Glu Lys Ala Thr			
100	105	110	
Thr Lys Ile Gln Glu Tyr Tyr Asn Lys Leu Cys Gln Glu Val Thr Asn			
115	120	125	
Arg Glu Arg Asn Asp Gln Lys Met Leu Ala Asp Leu Asp Asp Leu Asn			
130	135	140	
Arg Thr Lys Lys Tyr Leu Glu Glu Arg Leu Ile Glu Leu Leu Arg Asp			
145	150	155	160
Lys Asp Ala Leu Trp Gln Lys Ser Asp Ala Leu Glu Phe Gln Gln Lys			
165	170	175	
Leu Ser Ala Glu Glu Arg Trp Leu Gly Asp Thr Glu Ala Asn His Cys			
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Leu Asp Cys Lys Arg Glu Phe Ser Trp Met Val Arg Arg His His Cys			
195	200	205	
Arg Ile Cys Gly Arg Ile Phe Cys Tyr Tyr Cys Cys Asn Asn Tyr Val			
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Leu Ser Lys His Gly Gly Lys Lys Glu Arg Cys Cys Arg Ala Cys Phe			
225	230	235	240
Gln Lys Leu Ser Glu Gly Pro Gly Ser Pro Asp Ser Ser Gly Ser Gly			
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Thr Ser Gln Gly Glu Leu Ser Pro Ala Leu Ser Pro Ala Ser Pro Gly			
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&lt;210&gt; 4247

&lt;211&gt; 5755

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4247

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<211> 1297

<212> PRT

<213> Homo sapiens

<400> 4248

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Gly	Glu	Asp	Arg	Arg	Gly	Ala	Pro	Ala	Gly	Ala	Thr	Ser	Phe	Pro	Ala
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Ala	Pro	Ser	Pro	Leu	Pro	Leu	His	Thr	His	Ala	Arg	Ser	Leu	Ala	Gly
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Ala	Arg	Thr	Pro	Pro	Ala	Pro	Asp	Pro	His	Leu	Gly	Gly	Arg	His	Thr
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Leu	Gly	Ser	Pro	Ser	Arg	Gly	Ser	Arg	Ser	Gly	Met	Glu	Ala	Ala	Arg
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Thr	Glu	Arg	Pro	Ala	Gly	Arg	Pro	Gly	Ala	Pro	Leu	Val	Arg	Thr	Gly
				85					90					95	
Leu	Leu	Leu	Leu	Ser	Thr	Trp	Val	Leu	Ala	Gly	Ala	Glu	Ile	Thr	Trp
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Asp	Ala	Thr	Gly	Gly	Pro	Gly	Arg	Pro	Ala	Ala	Pro	Ala	Ser	Arg	Pro
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Pro	Ala	Leu	Ser	Pro	Leu	Ser	Pro	Arg	Ala	Val	Ala	Ser	Gln	Trp	Pro
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Glu	Glu	Leu	Ala	Ser	Ala	Arg	Arg	Ala	Ala	Val	Leu	Gly	Arg	Arg	Ala
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Gly	Pro	Glu	Leu	Leu	Pro	Gln	Gln	Gly	Gly	Arg	Gly	Gly	Glu	Met	
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Gln	Val	Glu	Ala	Gly	Gly	Thr	Ser	Pro	Ala	Gly	Glu	Arg	Arg	Gly	Arg
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Gly	Ile	Pro	Ala	Pro	Ala	Lys	Leu	Gly	Gly	Ala	Arg	Arg	Ser	Arg	Arg
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Ala	Gln	Pro	Pro	Ile	Thr	Gln	Glu	Arg	Gly	Asp	Ala	Trp	Ala	Thr	Ala

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Pro Ala Asp Gly Ser Arg Gly Ser Arg Pro Leu Ala Lys Gly Ser Arg		
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Glu Glu Val Lys Ala Pro Arg Ala Gly Gly Ser Ala Ala Glu Asp Leu		240
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Arg Leu Pro Ser Thr Ser Phe Ala Leu Thr Gly Asp Ser Ala His Asn		255
	260	265
Gln Ala Met Val His Trp Ser Gly His Asn Ser Ser Val Ile Leu Ile		270
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Leu Thr Lys Leu Tyr Asp Phe Asn Leu Gly Ser Val Thr Glu Ser Ser		285
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Leu Trp Arg Ser Thr Asp Tyr Gly Thr Thr Tyr Glu Lys Leu Asn Asp		300
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Lys Val Gly Leu Lys Thr Val Leu Ser Tyr Leu Tyr Val Asn Pro Thr		320
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Asn Lys Arg Lys Ile Met Leu Leu Ser Asp Pro Glu Met Glu Ser Ser		335
	340	345
Ile Leu Ile Ser Ser Asp Glu Gly Ala Thr Tyr Gln Lys Tyr Arg Leu		350
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Thr Phe Tyr Ile Gln Ser Leu Phe His Pro Lys Gln Glu Asp Trp		365
370	375	380
Val Leu Ala Tyr Ser Leu Asp Gln Lys Leu Tyr Ser Ser Met Asp Phe		385
385	390	395
Gly Arg Arg Trp Gln Leu Met His Glu Arg Ile Thr Pro Asn Arg Phe		400
	405	410
Tyr Trp Ser Val Ala Gly Leu Asp Lys Glu Ala Asp Leu Val His Met		415
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Glu Val Arg Thr Thr Asp Gly Tyr Ala His Tyr Leu Thr Cys Arg Ile		430
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Gln Glu Cys Ala Glu Thr Thr Arg Ser Gly Pro Phe Ala Arg Ser Ile		445
	450	455
Asp Ile Ser Ser Leu Val Val Gln Asp Glu Tyr Ile Phe Ile Gln Val		460
465	470	475
Thr Thr Ser Gly Arg Ala Ser Tyr Tyr Val Ser Tyr Arg Arg Glu Ala		480
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Phe Ala Gln Ile Lys Leu Pro Lys Tyr Ser Leu Pro Lys Asp Met His		495
	500	505
Ile Ile Ser Thr Asp Glu Asn Gln Val Phe Ala Ala Val Gln Glu Trp		510
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Asn Gln Asn Asp Thr Tyr Asn Leu Tyr Ile Ser Asp Thr Arg Gly Ile		525
	530	535
Tyr Phe Thr Leu Ala Met Glu Asn Ile Lys Ser Ser Arg Gly Leu Met		540
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	565	570
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	580	585
Tyr Asn Lys Gly Arg Asp Trp Arg Leu Leu Gln Ala Pro Asp Val Asp		590
	595	600
Leu Arg Gly Ser Pro Val His Cys Leu Leu Pro Phe Cys Ser Leu His		605
	610	615
Leu His Leu Gln Leu Ser Glu Asn Pro Tyr Ser Ser Gly Arg Ile Ser		620
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Ser Lys Glu Thr Ala Pro Gly Leu Val Val Ala Thr Gly Asn Ile Gly		640

Pro	Glu	Leu	Ser	Tyr	Thr	Asp	Ile	Gly	Val	Phe	Ile	Ser	Ser	Asp	Gly	
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Gly	Asn	Thr	Trp	Arg	Gln	Ile	Phe	Asp	Glu	Glu	Tyr	Asn	Val	Trp	Phe	
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Leu	Asp	Trp	Gly	Gly	Ala	Leu	Val	Ala	Met	Lys	His	Thr	Pro	Leu	Pro	
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Val	Arg	His	Leu	Trp	Val	Ser	Phe	Asp	Glu	Gly	His	Ser	Trp	Asp	Lys	
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Tyr	Gly	Phe	Thr	Ser	Val	Pro	Leu	Phe	Val	Asp	Gly	Ala	Leu	Val	Glu	
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Ala	Gly	Met	Glu	Thr	His	Ile	Met	Thr	Val	Phe	Gly	His	Phe	Ser	Leu	
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Arg	Ser	Glu	Trp	Gln	Leu	Val	Lys	Val	Asp	Tyr	Lys	Ser	Ile	Phe	Ser	
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Arg	His	Cys	Thr	Lys	Glu	Asp	Tyr	Gln	Thr	Trp	His	Leu	Leu	Asn	Gln	
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Gly	Glu	Pro	Cys	Val	Met	Gly	Glu	Arg	Lys	Ile	Phe	Lys	Lys	Arg	Lys	
785				790						795					800	
Pro	Gly	Ala	Gln	Cys	Ala	Leu	Gly	Arg	Asp	His	Ser	Gly	Ser	Val	Val	
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Ser	Glu	Pro	Cys	Val	Cys	Ala	Asn	Trp	Asp	Phe	Glu	Cys	Asp	Tyr	Gly	
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Tyr	Glu	Arg	His	Gly	Glu	Ser	Gln	Cys	Val	Pro	Ala	Phe	Trp	Tyr	Asn	
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Pro	Ala	Ser	Pro	Ser	Lys	Asp	Cys	Ser	Leu	Gly	Gln	Ser	Tyr	Leu	Asn	
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Ser	Thr	Gly	Tyr	Arg	Arg	Ile	Val	Ser	Asn	Asn	Cys	Thr	Asp	Gly	Leu	
865				870						875					880	
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His	Leu	Arg	Val	Pro	Phe	Val										

1075                      1080                      1085  
 His Asn Pro Asp Ile Pro Glu Trp Arg Lys Asp Ile Gly Asn Val Ile  
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 Lys Arg Ala Leu Val Lys Val Thr Ser Val Pro Glu Asp Gln Ile Leu  
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 Ile Ala Val Phe Pro Gly Leu Pro Thr Ser Ala Glu Leu Phe Ile Leu  
 1125                      1130                      1135  
 Pro Pro Lys Asn Leu Thr Glu Arg Arg Lys Gly Asn Glu Gly Asp Leu  
 1140                      1145                      1150  
 Glu Gln Ile Val Glu Thr Leu Phe Asn Ala Leu Asn Gln Asn Leu Val  
 1155                      1160                      1165  
 Gln Phe Glu Leu Lys Pro Gly Val Gln Val Ile Val Tyr Val Thr Gln  
 1170                      1175                      1180  
 Leu Thr Leu Ala Pro Leu Val Asp Ser Ser Ala Gly His Ser Ser Ser  
 1185                      1190                      1195                      1200  
 Ala Met Leu Met Leu Leu Ser Val Val Phe Val Gly Leu Ala Val Phe  
 1205                      1210                      1215  
 Leu Ile Tyr Lys Phe Lys Arg Lys Ile Pro Trp Ile Asn Ile Tyr Ala  
 1220                      1225                      1230  
 Gln Val Gln His Asp Lys Glu Gln Glu Met Ile Gly Ser Val Ser Gln  
 1235                      1240                      1245  
 Ser Glu Asn Ala Pro Lys Ile Thr Leu Ser Asp Phe Thr Glu Pro Glu  
 1250                      1255                      1260  
 Glu Leu Leu Asp Lys Glu Leu Asp Thr Arg Val Ile Gly Gly Ile Ala  
 1265                      1270                      1275                      1280  
 Thr Ile Ala Asn Ser Glu Ser Thr Lys Glu Ile Pro Asn Cys Thr Ser  
 1285                      1290                      1295  
 Val

&lt;210&gt; 4249

&lt;211&gt; 553

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4249

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 120  
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 180  
 ccacaggaag gcagcataat aggaccccaa acaaggagga aaagcagcct cctgaaaccg  
 240  
 accctgatat cagaaccagc agacatgggc actcagcagt tcttacaact gaatcccaat  
 300  
 ctgcaaaagt ttagtagaga catggaagac gtaaagggga cccaagcaa gcctctagag  
 360  
 aattataaca tggttgctgg gcttggtggc tcacgcgtgt catcgagca ctttgggagg  
 420  
 ctgaggcagg aggatcgctt gagcccagga gttcaagacc agcctggacc acatagttag  
 480  
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 540

ggatgagatt aac  
553

<210> 4250  
<211> 164  
<212> PRT  
<213> Homo sapiens

<400> 4250  
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Leu Lys Leu Phe Leu Arg Asn Ser Thr Ala Ser Arg Thr Lys Ile Lys  
20 25 30  
Met Ile Tyr Lys Asn Ala Lys Thr Pro Ser Thr Gln His Gly Lys Ile  
35 40 45  
Arg Asn Ala Ser Gly Ile Asn Pro Arg Val Pro Gly Pro Gln Glu Gly  
50 55 60  
Ser Ile Ile Gly Pro Gln Thr Arg Arg Lys Ser Ser Leu Leu Lys Pro  
65 70 75 80  
Thr Leu Ile Ser Glu Pro Ala Asp Met Gly Thr Gln Gln Phe Leu Gln  
85 90 95  
Leu Asn Pro Asn Leu Gln Lys Phe Ser Arg Asp Met Glu Asp Val Lys  
100 105 110  
Gly Thr Pro Ser Lys Pro Leu Glu Asn Tyr Asn Met Leu Ala Gly Leu  
115 120 125  
Gly Gly Ser Arg Val Ser Ser Gln His Phe Gly Arg Leu Arg Gln Glu  
130 135 140  
Asp Arg Leu Ser Pro Gly Val Gln Asp Gln Pro Gly Pro His Ser Glu  
145 150 155 160  
Thr Pro Ile Ser

<210> 4251  
<211> 1574  
<212> DNA  
<213> Homo sapiens

<400> 4251  
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120  
gggggggggc caggccctaa cccatttat ttcattccac agatgagggc aaccttaaga  
180  
gggaaggggg agatggcagg gccagcgggc gcaggaagtg ccttcccacc ccaggacct  
240  
gacacatctc gtctccctc ttttcgcac tgtgggcaca aagacacttt ttcttcgca  
300  
ggggcgaggag cccctagttc caactctgag gacgcgtgac atggtgggca ccggaaagga  
360  
ggggacttct cctgcacccc aagaagtggg ggggagattg ctgcccctat agccatatct  
420  
cggccccctc ccactcacca cccccacccc aggtgctggg ggtcccttat ttttatgcaa  
480



taactgagct tgatgggggt gggcaggggg ccagttgagc caatcaccag cctccatata  
 540  
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 600  
 aaacgctacc tgcgcctgac ctgtgcccc gacctgtcca ccgtgcgccc tgtggcagtt  
 660  
 ttgaaaaagt cgctgtgcat ggtcaagtgc cactggaaag agaagcagga ctacgcgttt  
 720  
 gcctgcgagc agatgaagtc gatccggcag gatctgacgg tgcagggcat ccgcaccgag  
 780  
 ttcacggtgg aggtgtacga gacctatgcc cggatcgctt tggagaaggg tgaccatgaa  
 840  
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 900  
 gtgggagagt ttactgccta ccgaatcctc tactacatct tcaccaagaa ctcgggagac  
 960  
 atcaccacgg agctggcata cctcacacga gaactgaagg cagatccttg cgtggcccac  
 1020  
 gccttggcat taaggacagc ctgggccctg ggcaactacc accgcttttt ccggtcttac  
 1080  
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 1140  
 gtcgacctca aggccatgat caaaacgtat gtggtgcaa gctcccttct gcctttgtc  
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 agacagctc tggt  
 1574

&lt;210&gt; 4252

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4252

Met Gly Val Gly Arg Gly Pro Val Glu Pro Ile Thr Ser Leu His Ile  
 1 5 10 15  
 Thr Asp Pro Asp Pro Glu Ser Gln Glu Leu Gln Ile Gly Gly Thr Cys  
 20 25 30  
 Pro Asp Ile Thr Lys Arg Tyr Leu Arg Leu Thr Cys Ala Pro Asp Pro  
 35 40 45  
 Ser Thr Val Arg Pro Val Ala Val Leu Lys Lys Ser Leu Cys Met Val  
 50 55 60  
 Lys Cys His Trp Lys Glu Lys Gln Asp Tyr Ala Phe Ala Cys Glu Gln

65					70					75				80	
Met	Lys	Ser	Ile	Arg	Gln	Asp	Leu	Thr	Val	Gln	Gly	Ile	Arg	Thr	Glu
				85					90					95	
Phe	Thr	Val	Glu	Val	Tyr	Glu	Thr	His	Ala	Arg	Ile	Ala	Leu	Glu	Lys
			100					105					110		
Gly	Asp	His	Glu	Glu	Phe	Asn	Gln	Cys	Gln	Thr	Gln	Leu	Lys	Ser	Leu
		115					120					125			
Tyr	Ala	Glu	Asn	Leu	Pro	Gly	Asn	Val	Gly	Glu	Phe	Thr	Ala	Tyr	Arg
	130					135					140				
Ile	Leu	Tyr	Tyr	Ile	Phe	Thr	Lys	Asn	Ser	Gly	Asp	Ile	Thr	Thr	Glu
145					150					155					160
Leu	Ala	Tyr	Leu	Thr	Arg	Glu	Leu	Lys	Ala	Asp	Pro	Cys	Val	Ala	His
				165					170					175	
Ala	Leu	Ala	Leu	Arg	Thr	Ala	Trp	Ala	Leu	Gly	Asn	Tyr	His	Arg	Phe
		180						185					190		
Phe	Arg	Leu	Tyr	Cys	His	Ala	Pro	Cys	Met	Ser	Gly	Tyr	Leu	Val	Asp
	195						200					205			
Lys	Phe	Ala	Asp	Arg	Glu	Arg	Lys	Val	Ala	Leu	Lys	Ala	Met	Ile	Lys
	210					215					220				
Thr	Tyr	Val	Val	Pro	Ser	Ser	Leu	Leu	Pro	Leu	Leu	Phe	Pro	Ser	Phe
225					230					235					240
Arg	Leu	Ala	Pro	Pro	Leu	Arg	Pro	Ala	Pro	Gly	Arg	Arg	Pro	Pro	Pro
			245						250					255	
Ala	Pro	Asn	Pro	Cys	Pro	Gly	Pro	Cys	Phe	Pro	Ile	Ile	Phe	Leu	His
		260						265					270		
Ser	Ala	Leu	Pro	Ser	Pro	Val	Pro	Leu	Ala	Leu	Leu	Val	Gly	His	Leu
	275						280					285			
Cys	Val	Pro	Gly	His	Ser	Ser	Pro	Ser	Pro	His	Cys	Ser	Gln	Leu	Thr
	290					295					300				
Ala	Ser	Gly	Ala	Ser	Ser	Pro	Pro	His	Leu	Cys	Val	Ser	Ser	Ser	Cys
305					310					315					320
Ser	Leu	Leu	Pro	Gly	Pro	Pro	Ser	Ser	Leu	Leu	Ala	Leu	Gly	Phe	Leu
			325						330					335	
Arg	Thr	Leu	Arg	Ser	Leu	Leu	Ser	Gln	Leu	Val	Ala	Val	Leu	Pro	Pro
		340						345					350		

&lt;210&gt; 4253

&lt;211&gt; 1287

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4253

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 ggatagatag aactatcggc cccaattcct cagccctacc tgcaaccacc gcttgccatg  
 120  
 gtttccttgt ggggtggaggg tactttcccg ccccctgggt tcgggcttgc ccacgtggct  
 180  
 tgctctggcc atggaatgaa gcagaaacga aagcctgcc gttctgagcc tatgccggaa  
 240  
 gacgccttgg gcggttccgc ggtccctgtg cgcttccacc ttcaccacaga aggacttctc  
 300  
 tgggtgcagcc gctgcttctt cagccacggc caaaaggat cggagccccc tggccgatcc  
 360

gcaggtctgc agggagccac agagcgcagc ggccggccca gcgttcaagc ccaagcacag  
 420  
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 480  
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 540  
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 600  
 gtaagccagt ggagaagtcc agggctagtg tgggggctcc ggcgggggct gtggcccca  
 660  
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 720  
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 960  
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 1080  
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 1200  
 agtgggtgtc gtcactatga agacccaca gggcggcgcc agaccttctt tcgaacgcca  
 1260  
 tcctctaaag cctcggctcc aaccggt  
 1287

&lt;210&gt; 4254

&lt;211&gt; 114

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4254

Met Val Ser Leu Trp Val Glu Gly Thr Phe Pro Pro Pro Gly Phe Gly  
 1 5 10 15  
 Leu Ala His Val Ala Cys Ser Gly His Gly Met Lys Gln Lys Arg Lys  
 20 25 30  
 Pro Ala Ser Ser Glu Pro Met Pro Glu Asp Ala Leu Gly Gly Ser Ala  
 35 40 45  
 Val Pro Val Arg Phe His Leu His Pro Glu Gly Leu Leu Trp Cys Ser  
 50 55 60  
 Arg Cys Phe Phe Ser His Gly Pro Lys Gly Ser Glu Pro Pro Gly Arg  
 65 70 75 80  
 Ser Ala Gly Leu Gln Gly Ala Thr Glu Arg Ser Gly Arg Pro Ser Val  
 85 90 95  
 Gln Ala Gln Ala Gln Ala Cys Glu Asn Leu Val Pro Ala Thr Val Trp  
 100 105 110  
 Asp Gly

<210> 4255  
<211> 2205  
<212> DNA  
<213> Homo sapiens

<400> 4255  
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120  
aacacccaat ggcgtcctca gaatttattc tgggtccctc atgggacaag cattggatcc  
180  
cactaggaaa caatggatc tccatgcagt agctaacca gggttgattt ctttgactgg  
240  
tccttactta gatgttgagg gagctgggta tgttgtagaca atcagtcaca caattcattc  
300  
atccagtaca cagctgtctt ctgggcacac tgtggctgtg atgggcattg acttcacact  
360  
cagatacttc taaaagtgc tgatggacct attacctgtc tgtaaccaag atgggtggcaa  
420  
caaaataagg tgcttcataa tggaggacag gggttatctg gtggcgacac cgactctcat  
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cgaccccaaa ggacatgcac ctgtggagca gcagcacatc acccacaagg agcccctggg  
540  
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600  
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660  
ccttgtgcat ggcagccact gttccaaata cagattagca aggatcccag gaaccaacgc  
720  
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780  
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840  
gtgccctcta gaggtcaatg agtgactgg caacctcacc aatgcagaga accgaaaccc  
900  
cagctgcgag gtccaccagg agccggtgac atacacagct attgaccctg gcctgcaaga  
960  
tgctcttcac cagtgtgtca acagcaggtg cagtcagagg ctggaaagtg gggactgttt  
1020  
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1080  
accctactgt gccccccaga aagaatgctt cgggggggatt gtgggagcca aaagtcccta  
1140  
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1200  
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1320  
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1380

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 1440  
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 1620  
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 1680  
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 1740  
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 1800  
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 1860  
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 1920  
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 1980  
 acagacctgc cataacacta atggaaggta acagaaggcg aacctccaaa cacagagacg  
 2040  
 gaacctgcaa gtgaagctga gccagaggaa tgttccaaag agccagaagc attcagctct  
 2100  
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 2160  
 acaaattgtg gcattgaaga tttcgctttg tttcttagcg gtacc  
 2205

&lt;210&gt; 4256

&lt;211&gt; 384

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4256

Met	Ala	Thr	Ser	His	Val	Thr	Asp	Glu	Trp	Met	Thr	Gln	Met	Glu	Met
1				5				10					15		
Ser	Ser	Leu	Asn	Thr	Tyr	Ile	Val	Arg	Arg	Cys	Ile	Ala	Thr	Pro	Asn
		20						25				30			
Gly	Val	Leu	Arg	Ile	Tyr	Ser	Gly	Ser	Leu	Met	Gly	Gln	Ala	Leu	Asp
		35					40					45			
Pro	Thr	Arg	Lys	Gln	Trp	Tyr	Leu	His	Ala	Val	Ala	Asn	Pro	Gly	Leu
		50				55					60				
Ile	Ser	Leu	Thr	Gly	Pro	Tyr	Leu	Asp	Val	Gly	Gly	Ala	Gly	Tyr	Val
65				70						75				80	
Val	Thr	Ile	Ser	His	Thr	Ile	His	Ser	Ser	Ser	Thr	Gln	Leu	Ser	Ser
			85					90					95		
Gly	His	Thr	Val	Ala	Val	Met	Gly	Ile	Asp	Phe	Thr	Leu	Arg	Tyr	Phe
			100					105					110		
Tyr	Lys	Val	Leu	Met	Asp	Leu	Leu	Pro	Val	Cys	Asn	Gln	Asp	Gly	Gly
		115					120					125			
Asn	Lys	Ile	Arg	Cys	Phe	Ile	Met	Glu	Asp	Arg	Gly	Tyr	Leu	Val	Ala
		130					135					140			
His	Pro	Thr	Leu	Ile	Asp	Pro	Lys	Gly	His	Ala	Pro	Val	Glu	Gln	Gln

145                      150                      155                      160  
 His Ile Thr His Lys Glu Pro Leu Val Ala Asn Asp Ile Leu Asn His  
                                  165                      170                      175  
 Pro Asn Phe Val Lys Lys Asn Leu Cys Asn Ser Phe Ser Asp Arg Thr  
                                  180                      185                      190  
 Val Gln Arg Phe Tyr Lys Phe Asn Thr Ser Leu Ala Gly Asp Leu Thr  
                                  195                      200                      205  
 Asn Leu Val His Gly Ser His Cys Ser Lys Tyr Arg Leu Ala Arg Ile  
                                  210                      215                      220  
 Pro Gly Thr Asn Ala Phe Val Gly Ile Val Asn Glu Thr Cys Asp Ser  
 225                                   230                                   235                                   240  
 Leu Ala Phe Cys Ala Cys Ser Met Val Asp Arg Leu Cys Leu Asn Cys  
                                  245                                   250                                   255  
 His Arg Met Glu Gln Asn Glu Cys Glu Cys Pro Cys Glu Cys Pro Leu  
                                  260                                   265                                   270  
 Glu Val Asn Glu Cys Thr Gly Asn Leu Thr Asn Ala Glu Asn Arg Asn  
                                  275                                   280                                   285  
 Pro Ser Cys Glu Val His Gln Glu Pro Val Thr Tyr Thr Ala Ile Asp  
                                  290                                   295                                   300  
 Pro Gly Leu Gln Asp Ala Leu His Gln Cys Val Asn Ser Arg Cys Ser  
 305                                   310                                   315                                   320  
 Gln Arg Leu Glu Ser Gly Asp Cys Phe Gly Val Leu Asp Cys Glu Trp  
                                  325                                   330                                   335  
 Cys Met Val Asp Ser Asp Gly Lys Thr His Leu Asp Lys Pro Tyr Cys  
                                  340                                   345                                   350  
 Ala Pro Gln Lys Glu Cys Phe Gly Gly Ile Val Gly Ala Lys Ser Pro  
                                  355                                   360                                   365  
 Tyr Val Asp Asp Met Gly Ala Ile Gly Asp Glu Val Ile Thr Leu Lys  
                                  370                                   375                                   380

&lt;210&gt; 4257

&lt;211&gt; 1541

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4257

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 120  
 tgagtgccct gaggagtgc acagagcctg ggatggatct ttgggagttc tgcagcgaaa  
 180  
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 240  
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 300  
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 360  
 aattatcagc tcagagattg tgaggcctct ctcttctgca atccgagttt tattggcgac  
 420  
 aactgaggg gcttcaagaa gtctgtggtg accttcata tctttatggc aagagatttt  
 480  
 gccacacat cactccacac ctctgaccaa agcccgggga agcacatggt caccatggat  
 540

ggggttaggg aagaagatct agcgcccttc tccctccgga agaggtggga gtcggagcct  
 600  
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 660  
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 720  
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 780  
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 960  
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 1020  
 gctgacacca taaagctggc caaggtgcac ggaggaacaa ctgcagacat gatctactcc  
 1080  
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 1140  
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 1200  
 tgtgatcata tgggtgatgg ccagcctctg gctgaggact ctggcctgca tattatagct  
 1260  
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 1380  
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 1440  
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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4261

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&lt;211&gt; 156

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4262

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&lt;210&gt; 4263

&lt;211&gt; 7710

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&lt;213&gt; Homo sapiens

&lt;400&gt; 4263

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<213> Homo sapiens

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 Lys Met Leu Leu Val His Gly His Phe Tyr Tyr Ile Arg Ile Ser Glu  
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&lt;210&gt; 4265

&lt;211&gt; 2422

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4265

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&lt;210&gt; 4266

&lt;211&gt; 613

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4266

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Thr Gln Asn Gly Arg Leu Thr Asp Phe Leu Asp Cys Val Ile Ile Ser			
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His Phe His Leu Asp His Cys Gly Ala Leu Pro Tyr Phe Ser Glu Met			
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Val Gly Tyr Asp Gly Pro Ile Tyr Met Thr His Pro Thr Gln Ala Ile			
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Cys Pro Ile Leu Leu Glu Asp Tyr Arg Lys Ile Ala Val Asp Lys Lys			
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Gly Glu Ala Asn Phe Phe Thr Ser Gln Met Ile Lys Asp Cys Met Lys			
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<212> DNA

<213> Homo sapiens

<400> 4267

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&lt;210&gt; 4268

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 <213> Homo sapiens

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 Lys Arg Cys Glu Ser Cys Ser Gln Lys Leu Glu Arg Glu Asn Asn His  
 50 55 60  
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 Leu Asn Asn Glu Glu His Glu Tyr Ala Ser Lys Lys Arg Lys Lys Asp  
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 His Phe Arg Asn Asp Thr Asn Thr Gln Ser Phe Tyr His Glu Lys Trp  
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 130 135 140  
 Ile Arg Arg Phe Asn Tyr Val Val Lys Leu Leu Gln Leu Ile Ala Lys  
 145 150 155 160  
 Ser Gln Leu Thr Ser Leu Ser Gly Val Ala Gln Lys Asn Tyr Phe Asn  
 165 170 175  
 Ile Leu Asp Lys Ile Val Gln Lys Val Leu Asp Asp His His Asn Pro  
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&lt;210&gt; 4270

&lt;211&gt; 1084

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4270

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			20					25					30		
Gln	Arg	Gly	Arg	Val	Leu	Pro	Pro	Pro	Ala	Pro	Leu	Asp	Thr	Thr	Asn
		35					40					45			
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Pro	Val	Tyr	Cys	Leu	Cys	Arg	Leu	Pro	Tyr	Asp	Val	Thr	Arg	Phe	Met
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Ile	Glu	Cys	Asp	Met	Cys	Gln	Asp	Trp	Phe	His	Gly	Ser	Cys	Val	Gly
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Val	Glu	Glu	Glu	Lys	Ala	Ala	Asp	Ile	Asp	Leu	Tyr	His	Cys	Pro	Asn
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Pro	Thr	Phe	Val	Arg	Glu	Leu	Arg	Ser	Arg	Thr	Phe	Asp	Ser	Ser	Asp
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Glu	Val	Ile	Leu	Lys	Pro	Thr	Gly	Asn	Gln	Leu	Thr	Val	Glu	Phe	Leu
			165					170						175	
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		180						185						190	
Leu	Gly	Met	Thr	Leu	Pro	Ser	Pro	Ser	Phe	Thr	Val	Arg	Asp	Val	Glu
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His	Tyr	Val	Gly	Ser	Asp	Lys	Glu	Ile	Asp	Val	Ile	Asp	Val	Thr	Arg
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Gln	Ala	Asp	Cys	Lys	Met	Lys	Leu	Gly	Asp	Phe	Val	Lys	Tyr	Tyr	Tyr
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3475

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 690 695 700  
 Ala Lys Pro Cys Ser Asp Pro Asn Arg Val Arg Glu Pro Gly Glu Val  
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 Glu Phe Asp Ile Glu Glu Asp Tyr Thr Thr Asp Glu Asp Met Val Glu  
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 Gly Val Glu Gly Lys Leu Gly Asn Gly Ser Gly Ala Gly Gly Ile Leu  
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 Asp Leu Leu Lys Ala Ser Arg Gln Val Gly Gly Pro Asp Tyr Ala Ala  
 755 760 765  
 Leu Thr Glu Ala Pro Ala Ser Pro Ser Thr Gln Glu Ala Ile Gln Gly  
 770 775 780  
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 785 790 795 800  
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 820 825 830  
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 Leu Gly Ala Cys Phe Lys Asp Ala Glu Tyr Ile Tyr Pro Ser Leu Glu  
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 Ser Asp Asp Asp Asp Pro Ala Leu Lys Ser Arg Pro Lys Lys Lys  
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 Leu Pro Lys Gln Asp Arg Pro Val Arg Glu Gly Thr Arg Val Ala Ser  
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 Ile Glu Thr Gly Leu Ala Ala Ala Ala Lys Leu Ala Gln Gln Glu  
 930 935 940  
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 945 950 955 960  
 Lys Glu Val Glu Gln Pro Arg Pro Gln Asp Ser Asn Leu Ser Leu Thr  
 965 970 975  
 Val Pro Ala Pro Thr Val Ala Ala Thr Pro Gln Leu Val Thr Ser Ser  
 980 985 990  
 Ser Pro Leu Pro Pro Pro Glu Pro Lys Gln Glu Ala Leu Ser Gly Ser  
 995 1000 1005  
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 1045 1050 1055  
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&lt;210&gt; 4271

&lt;211&gt; 588

<213> Homo sapiens

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588

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<213> Homo sapiens

[illegible]

<213> Homo. sapiens

&lt;400&gt; 4273

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&lt;210&gt; 4274

&lt;211&gt; 235

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4274

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			20					25					30		
Glu	Glu	Ser	Ile	Arg	Ala	His	Val	Met	Ala	Ser	His	His	Ser	Lys	Arg
		35					40					45			
Arg	Gly	Arg	Ala	Ser	Ser	Glu	Ser	Gln	Gly	Leu	Gly	Ala	Gly	Val	Arg
		50				55					60				
Thr	Glu	Xaa	Asp	Val	Glu	Glu	Ala	Leu	Arg	Arg	Lys	Leu	Glu	Glu	
65				70					75				80		
Leu	Thr	Ser	Asn	Val	Ser	Asp	Gln	Glu	Thr	Phe	Val	Arg	Gly	Gly	Gly
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Ser	Gln	Gly	Arg	Lys	Cys	Arg	Ala	Gln	Gln	Gly	Gln	Ile	Ser	Trp	Ala
		100						105					110		
Ser	Pro	Pro	Gly	Gly	Pro	Gly	Arg	Trp	His	Gly	Cys	Pro	Ser	Asn	Gln
		115					120					125			
Gln	Thr	Gly	Lys	Lys	Pro	Gln	Asp	Pro	Gly	Asp	Pro	Val	Gln	Tyr	Asn
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Arg	Thr	Thr	Asp	Glu	Glu	Leu	Ser	Glu	Leu	Glu	Asp	Arg	Val	Ala	Val
145				150						155				160	
Thr	Ala	Ser	Glu	Val	Gln	Gln	Ala	Glu	Ser	Glu	Val	Ser	Asp	Ile	Glu
			165					170					175		
Ser	Arg	Ile	Ala	Ala	Leu	Arg	Ala	Ala	Gly	Leu	Thr	Val	Lys	Pro	Ser
		180						185					190		
Gly	Lys	Pro	Arg	Arg	Lys	Ser	Asn	Leu	Pro	Ile	Phe	Leu	Pro	Arg	Val
		195					200					205			
Ala	Gly	Lys	Leu	Gly	Lys	Arg	Pro	Glu	Asp	Pro	Asn	Ala	Asp	Pro	Ser
		210				215					220				
Ser	Glu	Ala	Lys	Ala	Met	Ala	Val	Pro	Ile	Phe					

225

230

235

&lt;210&gt; 4275

&lt;211&gt; 874

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4275

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 780  
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 874

&lt;210&gt; 4276

&lt;211&gt; 264

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4276

Met Gln Val Ala Leu Gly Ala His Leu Arg Asp Ala Arg Arg Gly Gln  
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 Arg Leu Arg Ser Gly Ala His Val Val Val Thr Gly Pro Pro Asn Ala  
 20 25 30  
 Gly Lys Ser Ser Leu Val Asn Leu Ser Arg Lys Pro Val Ser Ile  
 35 40 45  
 Val Ser Pro Glu Pro Gly Thr Thr Arg Asp Val Leu Glu Thr Pro Val  
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 Asp Leu Ala Gly Phe Pro Val Leu Leu Ser Asp Thr Ala Gly Leu Arg



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<210> 4277
<211> 1070
<212> DNA
<213> Homo sapiens
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3481

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 780  
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 gaccatctcc tcatgaacgt caaatgggtac taccgtcaat ctgaggttcc agattctgtg  
 900  
 tatcagcatt tggttcagga tcgacataat gaaaatgact ctggaagaga acttgtcatt  
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<210> 4278

<211> 253

<212> PRT

<213> Homo sapiens

<400> 4278

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Glu	Asn	Ser	Arg	Pro	Arg	Arg	Ser	Cys	Thr	Leu	Glu	Gly	Gly	Ala	Lys	35	40	45	
Asn	Tyr	Ala	Glu	Ser	Asp	His	Ser	Glu	Asp	Glu	Asp	Asn	Asp	Asn	Asn	50	55	60	
Ser	Ala	Thr	Ala	Glu	Glu	Ser	Thr	Lys	Lys	Asn	Lys	Lys	Lys	Pro	Pro	65	70	75	80
Lys	Lys	Lys	Ser	Arg	Tyr	Glu	Arg	Thr	Asp	Thr	Gly	Glu	Ile	Thr	Ser	85	90	95	
Tyr	Ile	Thr	Glu	Asp	Asp	Val	Val	Tyr	Arg	Pro	Gly	Asp	Cys	Val	Tyr	100	105	110	
Ile	Glu	Ser	Arg	Arg	Pro	Asn	Thr	Pro	Tyr	Phe	Ile	Cys	Ser	Ile	Gln	115	120	125	
Asp	Phe	Lys	Leu	Val	His	Asn	Ser	Gln	Ala	Cys	Cys	Arg	Ser	Pro	Thr	130	135	140	
Pro	Ala	Leu	Cys	Asp	Pro	Pro	Ala	Cys	Ser	Leu	Pro	Val	Ala	Ser	Gln	145	150	155	160
Pro	Pro	Gln	His	Leu	Ser	Glu	Ala	Gly	Arg	Gly	Pro	Val	Gly	Ser	Lys	165	170	175	
Arg	Asp	His	Leu	Leu	Met	Asn	Val	Lys	Trp	Tyr	Tyr	Arg	Gln	Ser	Glu	180	185	190	
Val	Pro	Asp	Ser	Val	Tyr	Gln	His	Leu	Val	Gln	Asp	Arg	His	Asn	Glu	195	200	205	
Asn	Asp	Ser	Gly	Arg	Glu	Leu	Val	Ile	Thr	Asp	Pro	Val	Ile	Lys	Asn	210	215	220	
Arg	Glu	Leu	Phe	Ile	Ser	Asp	Tyr	Val	Asp	Thr	Tyr	His	Ala	Ala	Ala	225	230	235	240
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<210> 4279  
<211> 1963  
<212> DNA  
<213> Homo sapiens

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gccttctctg aattcattgg catgatccaa gagatccagc aggctgctga gcgcctggag  
960  
cggaactttg tggacagccg gcagctcaag gtatgtgcca cctgctttga cctctcggtc  
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accggccta cctctgagat gctgctgcgg cgtcttgac agctgctaaa ccagggtgctg  
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1200  
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1260  
ctggtgcgtg gccagcctc agagagagag caagccacat cagtgtcctt ggcagatccc  
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<210> 4280

<211> 575

<212> PRT

<213> Homo sapiens

<400> 4280

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Met	Met	Tyr	Ser	Leu	Ser	Val	His	Gln	Gln	Leu	Gly	Lys	Met	Val	Gly
			20					25				30			
Val	Ser	Asp	Asp	Val	Asn	Glu	Tyr	Ala	Met	Ala	Leu	Arg	Asp	Thr	Glu
		35				40					45				
Asp	Lys	Leu	Arg	Arg	Cys	Pro	Lys	Arg	Arg	Lys	Asp	Ile	Leu	Ala	Glu
	50				55					60					
Leu	Thr	Lys	Ser	Gln	Lys	Val	Phe	Ser	Glu	Lys	Leu	Asp	His	Leu	Ser
65				70					75				80		
Arg	Arg	Leu	Ala	Trp	Val	His	Ala	Thr	Val	Tyr	Ser	Gln	Glu	Lys	Met
			85					90				95			
Leu	Asp	Ile	Tyr	Trp	Leu	Leu	Arg	Val	Cys	Leu	Arg	Thr	Ile	Glu	His
	100						105					110			
Gly	Asp	Arg	Thr	Gly	Ser	Leu	Phe	Ala	Phe	Met	Pro	Glu	Phe	Tyr	Leu
	115					120					125				
Ser	Val	Ala	Ile	Asn	Ser	Tyr	Ser	Ala	Leu	Lys	Asn	Tyr	Phe	Gly	Pro
	130					135					140				
Val	His	Ser	Met	Glu	Glu	Leu	Pro	Gly	Tyr	Glu	Glu	Thr	Leu	Thr	Arg
145				150					155					160	
Leu	Ala	Ala	Ile	Leu	Ala	Lys	His	Phe	Ala	Asp	Ala	Arg	Ile	Val	Gly
			165					170					175		
Thr	Asp	Ile	Arg	Asp	Ser	Leu	Met	Gln	Ala	Leu	Ala	Ser	Tyr	Val	Cys
	180						185					190			
Tyr	Pro	His	Ser	Leu	Arg	Ala	Val	Glu	Arg	Ile	Pro	Glu	Glu	Gln	Arg
	195					200					205				
Ile	Ala	Met	Val	Arg	Asn	Leu	Leu	Ala	Pro	Tyr	Glu	Gln	Arg	Pro	Trp
	210					215					220				
Ala	Gln	Thr	Asn	Trp	Ile	Leu	Val	Arg	Leu	Trp	Arg	Gly	Cys	Gly	Phe
225				230					235					240	
Gly	Tyr	Arg	Tyr	Thr	Arg	Leu	Pro	His	Leu	Leu	Lys	Thr	Lys	Leu	Glu

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<210> 4281
<211> 507
<212> DNA
<213> Homo sapiens
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<400> 4281
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120
gctgactctg agaggcagtg ggcttcccgc cagcacctcc ccctatcaca tttgtagggc
180
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tggtttatga ggccggaagt aagcaagcac cccctcatat caacctggca cttcacaccc  
 240  
 cccatgggta tcagtggggg tgctgggtgg ctggcaggca gccagagaca tttcagcagg  
 300  
 tcaggcatgg atgcaggtgg aaatgagaga ggatcagtga gcgcattcat gtcttttgag  
 360  
 tgggtctacag atgagtgggc tccagtctca aatgaggaga acaaataaggg aagtaggagc  
 420  
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 507

<210> 4282

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4282

Met	Asn	Ala	Leu	Thr	Asp	Pro	Leu	Ser	Phe	Pro	Pro	Ala	Ser	Met	Pro
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Asp	Leu	Leu	Lys	Cys	Leu	Trp	Leu	Pro	Ala	Ser	Gln	Pro	Ala	Pro	Pro
			20					25					30		
Leu	Ile	Thr	Met	Gly	Gly	Val	Lys	Cys	Gln	Val	Asp	Met	Arg	Gly	Cys
		35					40					45			
Leu	Leu	Thr	Ser	Gly	Leu	Ile	Asn	Gln	Pro	Tyr	Lys	Cys	Asp	Arg	Gly
	50					55				60					
Arg	Cys	Trp	Arg	Glu	Ala	His	Cys	Leu	Ser	Glu	Ser	Ala	Gln	Arg	Thr
65					70					75				80	
Glu	Ser	Gly	Asp	Ser	Trp	Gln	Lys	Arg	Gly	Gly	Leu	Arg	Leu	Trp	Gly
			85						90					95	
Ile	Trp	Pro	Ile	Gly	Gln	Leu	Trp	Gly	Ser						
			100						105						

<210> 4283

<211> 315

<212> DNA

<213> Homo sapiens

<400> 4283

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 120  
 gggagaaacc gagtccccgc cgggtcccca ccgtgtggcg ccgaccgaaa taactccagt  
 180  
 ccagctgcaa aaaccctccc gaaaacccaa gcttgtccgg cacaacttcg gtctctccag  
 240  
 cctcattcct gccgcactc cgccaaactg ctcgccctgc ccagcgcagc ggatgcagcg  
 300  
 ctcccggccc nacgg  
 315

<210> 4284

<211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 4284  
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 Ser Asn Gly Gln Gly Arg Gly Ala Gly Gly Pro Gly Glu Thr Glu Ser  
 20 25 30  
 Pro Pro Gly Pro His Arg Val Ala Pro Thr Glu Ile Thr Pro Val Gln  
 35 40 45  
 Leu Gln Lys Pro Ser Arg Lys Pro Lys Leu Val Arg His Asn Phe Gly  
 50 55 60  
 Leu Ser Ser Leu Ile Pro Ala Arg Thr Pro Pro Asn Cys Ser Pro Cys  
 65 70 75 80  
 Pro Ala Gln Arg Met Gln Arg Ser Arg Pro Xaa  
 85 90

<210> 4285  
 <211> 591  
 <212> DNA  
 <213> Homo sapiens

<400> 4285  
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 120  
 gagataccgc agggagccag tggctgctgg aaggatgacc tccagaagga actgagtgat  
 180  
 atatggtgat gcccagcctg cagtctgacc cctgaccctc ctctgaaccc gtteccccaa  
 240  
 cgggatctgg cagtgaccac cagaacctgg agcccacctg agtccagact tccctcaccc  
 300  
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 360  
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 420  
 ctgcaggact ccatagacag cctcactttg tgctcggggg cctgtcccaa ggcctcgagc  
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 591

<210> 4286  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 4286  
 Cys Pro Ala Cys Ser Leu Thr Pro Asp Pro Pro Leu Asn Pro Phe Pro  
 1 5 10 15  
 Gln Arg Asp Leu Ala Val Thr Thr Arg Thr Trp Ser Pro Pro Glu Ser

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<210> 4288
<211> 240
<212> PRT
<213> Homo sapiens
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&lt;400&gt; 4288

```

Met Arg Val Ala Thr Lys Ser Gly Arg Lys Arg Trp Leu Lys Ala Thr
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Thr Met Lys Asn Ser Val Arg Leu Val Ala Met Ala Pro Ser Pro Ala
20          25          30
Leu Thr Ser Ile Ser Ser Glu Pro Ser Glu Ala Trp Val Gln Ala Phe
35          40          45
Ala Ser Tyr Arg Met Ser Pro Gly Asn Trp Lys Thr Xaa Val Leu Ala
50          55          60
Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu Ala Asn
65          70          75          80
Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ser Asn
85          90          95
Arg Ala Ala Arg Ala Ala Ala Ala Arg Thr Ala Phe Ser Gln
100          105          110
Val Val Ala Ser His Arg Val Ala Thr Pro Gln Val Ser Gly Glu Asp
115          120          125
Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr Pro Glu
130          135          140
Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr Ser Lys
145          150          155          160
Met Ala Ala Pro Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln Thr Gly
165          170          175
Ser Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ser Ala Cys Ala
180          185          190
Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg Pro Ser
195          200          205
Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln Pro Ala
210          215          220
Val Ser Val Ala Trp Leu Pro Ala Pro Lys Arg Pro Ala Gln Pro Arg
225          230          235          240

```

&lt;210&gt; 4289

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4289

```

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tcctcacttc aggtgtcact gtcagcata tatccaggct ttgttttcat attggtcttg
120
caaagagcct tttgggaaca gttttcttat tgaacatac tcagtgttta aacctgcagg
180
tgtgggttg tggcagtcca catggcatcc tttgctctgt ccctgttctc ctgtctctgg
240
ctattcaggt tcccgtaggg atactgtcac ccttgaataa tggagcttgc ggaagaccaa
300
gccctggtt ttggagtcct tgtgctgagg ccgctgtaac ttgaggagag ttg
353

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&lt;210&gt; 4290

&lt;211&gt; 113

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4290

```

Met Thr Thr Leu Pro Val Arg Asp Met Arg Glu Lys Tyr Gly Ser Leu
 1           5           10           15
Leu Thr Ser Gly Val Thr Ala Gln His Ile Ser Arg Leu Cys Phe His
 20           25           30
Ile Gly Leu Ala Lys Ser Leu Leu Gly Thr Val Phe Leu Leu Lys His
 35           40           45
Thr Gln Cys Leu Asn Leu Gln Val Trp Val Gly Gly Ser Pro His Gly
 50           55           60
Ile Leu Cys Ser Val Pro Val Leu Leu Ser Leu Ala Ile Gln Val Pro
 65           70           75           80
Val Arg Ile Leu Ser Pro Leu Asn Asn Gly Ala Cys Gly Arg Pro Ser
 85           90           95
Pro Cys Phe Trp Ser Pro Cys Ala Glu Ala Ala Val Thr Cys Gly Glu
 100          105          110
Leu

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<210> 4291

<211> 517

<212> DNA

<213> Homo sapiens

<400> 4291

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120
tggagagaca cactttctca gaagtttgga tcttcagatc acttggagaa actatttaag
180
atgatgaag caagtgccca gtccttgct tataaggaaa aaggccattc tcagagttca
240
caattttcct ctgatcaaga aatagctcat ctgctgcctg aaaatgtgag tgcgctccca
300
gctacggtagg cagttgcttc tccacatacc acctcggcta ctccaaagcc cgccaccctt
360
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420
gtccacctg taaccactgt cacttctcag cctccacga cctcatttc tacagttttt
480
acacgggctg tggctacact ccaagcaatg gctacaa
517

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<210> 4292

<211> 172

<212> PRT

<213> Homo sapiens

<400> 4292

```

Xaa Asn Leu Pro Ser Gln Glu Leu Pro Gln Glu Asp Ser Leu Leu His
 1           5           10           15
Gly Gln Phe Ser Gln Ala Val Thr Pro Leu Ala His His His Thr Asp

```



1                      5                      10                      15  
 Ile Ala Val Glu Thr Asp Val His Gly Lys His Gln Gly Ser Gly  
                     20                      25                      30  
 Lys Trp Gln Lys Met Glu Lys Pro Tyr Ala Phe Thr Val His Cys Val  
                     35                      40                      45  
 Lys Arg Ala Arg Arg His Arg Trp Lys Trp Ala Gln Val Thr Phe Trp  
                     50                      55                      60  
 Cys Pro Glu Glu Gln Leu Cys His Leu Trp Leu Gln Thr Leu Arg Glu  
 65                      70                      75                      80  
 Met Leu Glu Lys Leu Thr Ser Arg Pro Lys His Leu Leu Val Phe Ile  
                     85                      90                      95  
 Asn Pro Phe Gly Gly Lys Gly Gln Gly Lys Arg Ile Tyr Glu Arg Lys  
                     100                      105                      110  
 Val Ala Pro Leu Phe Thr Leu Ala Ser Ile Thr Thr Asp Ile Ile Val  
                     115                      120                      125  
 Thr Glu His Ala Asn Gln Ala Lys Glu Thr Leu Tyr Glu Ile Asn Ile  
                     130                      135                      140  
 Asp Lys Tyr Asp Gly Ile Val Cys Val Gly Gly Asp Gly Met Phe Ser  
 145                      150                      155                      160  
 Glu Val Leu His Gly Leu Ile Gly Arg Thr Gln Arg Ser Ala Gly Val  
                     165                      170                      175  
 Asp Gln Asn His Pro Arg  
                     180

&lt;210&gt; 4295

&lt;211&gt; 431

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4295

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 120  
 catgtacatt ttgtgtatgg ctgcttttgt gccacaacag caggggttgag tattgcgaca  
 180  
 gagacccccca ttgccacaa gcctaaaaca ttgcatcg agccctttaa gaaagagttt  
 240  
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 300  
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 360  
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 420  
 cgtgccaacc a  
 431

&lt;210&gt; 4296

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4296

Xaa Leu Glu Asn His Cys Leu Leu Leu Pro Cys His Leu Tyr Thr Arg

1	5	10	15
Val Thr Asn Lys Ser Pro Leu Leu Ala Pro Cys Phe Val Asn Lys Ile			
20	25	30	
Cys Trp Thr Thr Ala Met Pro Val His Val His Phe Val Tyr Gly Cys			
35	40	45	
Phe Cys Ala Thr Thr Ala Gly Leu Ser Ile Ala Thr Glu Thr Pro Ile			
50	55	60	
Ala His Lys Pro Lys Thr Phe Ala Ile Glu Pro Phe Lys Lys Glu Phe			
65	70	75	80
Ala Gly Arg Ala Arg Trp Pro Trp Leu Pro Pro Val Ile Pro Ala Leu			
85	90	95	
Trp Lys Ala Glu Ala Gly Gly Glu Val Trp Ser Ser Lys Pro Ala Trp			
100	105	110	
Pro Ala Trp Arg Asn Pro Val Ser Pro Ser Gln Ile His Val Ile Ile			
115	120	125	
Pro Pro Gln Pro Pro Glu Tyr Leu Gly Leu			
130	135		

&lt;210&gt; 4297

&lt;211&gt; 1668

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4297

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120
tggaatatag caattaccta tgacggatta gaggaagatg atgaggtctt tgaagtaatt
180
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240
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300
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420
gacaccctgc ggggctttga ttctacagat ctttctcaaa ggaagcttag gaccctggg
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600
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900

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 1668

&lt;210&gt; 4298

&lt;211&gt; 411

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4298

Xaa	Met	Asp	Ser	Ala	Phe	Val	Gly	Ile	Lys	Val	Asn	Gln	Val	Ser	Ala
1				5					10					15	
Ala	Val	Gly	Lys	Asp	Phe	Thr	Val	Ile	Pro	Ser	Lys	Leu	Ile	Gln	Phe
		20						25					30		
Asp	Pro	Gly	Met	Ser	Thr	Lys	Met	Trp	Asn	Ile	Ala	Ile	Thr	Tyr	Asp
		35					40					45			
Gly	Leu	Glu	Glu	Asp	Asp	Glu	Val	Phe	Glu	Val	Ile	Leu	Asn	Ser	Pro
	50					55					60				
Val	Asn	Ala	Val	Leu	Gly	Thr	Lys	Thr	Lys	Ala	Ala	Val	Lys	Ile	Leu
65					70				75					80	
Asp	Ser	Lys	Gly	Gly	Gln	Cys	His	Pro	Ser	Tyr	Ser	Ser	Asn	Gln	Ser
			85					90					95		
Lys	His	Ser	Thr	Trp	Glu	Lys	Gly	Ile	Trp	His	Leu	Leu	Pro	Pro	Gly
			100					105					110		
Ser	Ser	Ser	Ser	Thr	Thr	Ser	Gly	Ser	Phe	His	Leu	Glu	Arg	Arg	Pro
			115				120					125			
Leu	Pro	Ser	Ser	Met	Gln	Leu	Ala	Val	Ile	Arg	Gly	Asp	Thr	Leu	Arg
		130				135					140				
Gly	Phe	Asp	Ser	Thr	Asp	Leu	Ser	Gln	Arg	Lys	Leu	Arg	Thr	Arg	Gly
145					150					155				160	
Asn	Gly	Lys	Thr	Val	Arg	Pro	Ser	Ser	Val	Tyr	Arg	Asn	Gly	Thr	Asp



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<210> 4300

<211> 84

<212> PRT

<213> Homo sapiens

<400> 4300

Gly	Cys	Leu	Trp	Ser	Ser	Ala	Ala	Arg	Ala	Gln	Gln	Thr	Ile	Tyr	His
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Ser	Val	Pro	Ser	Gly	Gly	His	Pro	Ser	Ser	Ser	His	Trp	Leu	Pro	Ala
				20				25					30		
Val	Ser	Leu	Gln	Ser	Pro	Asp	Arg	Arg	Leu	Ser	His	Asp	Pro	Ala	Ala
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Ser	Ser	Trp	Ser	Gly	Phe	Cys	Gly	Ile	Ser	Pro	Ala	Phe	Ser	Ala	Phe
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<211> 2429

<212> DNA

<213> Homo sapiens

<400> 4301

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&lt;210&gt; 4302

&lt;211&gt; 717

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4302

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			20					25					30		
Glu	Gly	Val	Gly	Gly	Gly	Ala	Ser	Ala	Leu	Thr	Ser	Gly	Ile	Ala	Ser
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Ser	Pro	Asp	Tyr	Glu	Phe	Asn	Val	Trp	Thr	Arg	Pro	Asp	Cys	Ala	Glu
		50				55				60					
Thr	Glu	Phe	Glu	Asn	Gly	Asn	Arg	Ser	Trp	Phe	Tyr	Phe	Ser	Val	Arg
65					70				75					80	
Gly	Gly	Met	Pro	Gly	Lys	Leu	Ile	Lys	Ile	Asn	Ile	Met	Asn	Met	Asn
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Lys	Gln	Ser	Lys	Leu	Tyr	Ser	Gln	Gly	Met	Ala	Pro	Phe	Val	Arg	Thr
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Leu	Pro	Thr	Arg	Pro	Arg	Trp	Glu	Arg	Ile	Arg	Asp	Arg	Pro	Thr	Phe
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Glu	Met	Thr	Glu	Thr	Gln	Phe	Val	Leu	Ser	Phe	Val	His	Arg	Phe	Val
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Glu	Gly	Arg	Gly	Ala	Thr	Thr	Phe	Phe	Ala	Phe	Cys	Tyr	Pro	Phe	Ser
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Tyr	Ser	Asp	Cys	Gln	Glu	Leu	Leu	Asn	Gln	Leu	Asp	Gln	Arg	Phe	Pro
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 645 650 655  
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**3500**

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Lys Ser Glu Leu Asp Met Met Glu Gly Asp His Thr Val Met Ser Asn				
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Ser Ser Val Ile His Leu Lys Pro Glu Glu Asn Tyr Arg Glu Glu				
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Gly Asp Pro Arg Thr Arg Ala Ser Asp Pro Gln Ser Pro Pro Gln Val				
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Ser Arg His Lys Ser His Tyr Arg Asn Arg Glu His Phe Ala Thr Ile				
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Arg Thr Ala Ser Leu Val Thr Arg Gln Met Gln Glu His Glu Gln Asp				
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Ser Glu Leu Arg Glu Gln Met Ser Gly Tyr Lys Arg Met Arg Arg Gln				
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His Gln Lys Gln Leu Met Thr Leu Glu Asn Lys Leu Lys Ala Glu Met				
	180		185	190
Asp Glu His Arg Leu Arg Leu Asp Lys Asp Leu Glu Thr Gln Arg Asn				
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Asn Phe Ala Ala Glu Met Glu Lys Leu Ile Lys Lys His Gln Ala Ala				
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Met Glu Lys Glu Ala Lys Val Met Ser Asn Glu Glu Lys Lys Phe Gln				
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&lt;210&gt; 4305

&lt;211&gt; 3400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4305

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&lt;210&gt; 4306

&lt;211&gt; 1052

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4306

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			20					25					30		
Thr	Leu	Thr	Ala	Ala	Gly	Ala	Cys	Pro	Gly	Ala	Gly	Ala	Asp	Ala	Leu
		35					40					45			
Glu	Ser	Pro	Ala	Ser	Pro	Gln	Leu	Val	Leu	Pro	Ala	Asn	Leu	Gly	Asp
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Ile	Glu	Ala	Leu	Asn	Leu	Gly	Asn	Asn	Gly	Leu	Glu	Glu	Val	Pro	Glu

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Gly	Leu	Gly	Ser	Ala	Leu	Gly	Ser	Leu	Arg	Val	Leu	Val	Leu	Arg	Arg
				85					90					95	
Asn	Arg	Phe	Ala	Arg	Leu	Pro	Pro	Ala	Val	Ala	Glu	Leu	Gly	His	His
			100					105					110		
Leu	Thr	Glu	Leu	Asp	Val	Ser	His	Asn	Arg	Leu	Thr	Ala	Leu	Gly	Ala
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Glu	Val	Val	Ser	Ala	Leu	Arg	Glu	Leu	Arg	Lys	Leu	Asn	Leu	Ser	His
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Asn	Gln	Leu	Pro	Ala	Leu	Pro	Ala	Gln	Leu	Gly	Ala	Leu	Ala	His	Leu
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Leu	Thr	Ala	Phe	Pro	Arg	Gln	Leu	Gln	Leu	Val	Ala	Leu	Glu	Glu	
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Leu	Asp	Val	Ser	Ser	Asn	Arg	Leu	Arg	Gly	Leu	Pro	Glu	Asp	Ile	Ser
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Ala	Leu	Arg	Ala	Leu	Lys	Ile	Leu	Trp	Leu	Ser	Gly	Ala	Glu	Leu	Gly
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Thr	Leu	Pro	Ala	Gly	Phe	Cys	Glu	Leu	Ala	Ser	Leu	Glu	Ser	Leu	Met
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Leu	Asp	Asn	Asn	Gly	Leu	Gln	Ala	Leu	Pro	Ala	Gln	Phe	Ser	Cys	Leu
		260				265					270				
Gln	Arg	Leu	Lys	Met	Leu	Asn	Leu	Ser	Ser	Asn	Leu	Phe	Glu	Glu	Phe
	275					280					285				
Pro	Ala	Ala	Leu	Leu	Pro	Leu	Ala	Gly	Leu	Glu	Glu	Leu	Tyr	Leu	Ser
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Arg	Asn	Gln	Leu	Thr	Ser	Val	Pro	Ser	Leu	Ile	Ser	Gly	Leu	Gly	Arg
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Leu	Leu	Thr	Leu	Trp	Leu	Asp	Asn	Asn	Arg	Ile	Arg	Tyr	Leu	Pro	Asp
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His	Ser	Gln	Pro	Ala	Val	Gln	Pro	Arg	Leu	Lys	Leu	Leu	Leu	Met	Gly
			405				410						415		
His	Lys	Ala	Ala	Gly	Lys	Thr	Leu	Leu	Arg	His	Cys	Leu	Thr	Glu	Glu
		420					425					430			
Arg	Val	Glu	Gly	Cys	Pro	Gly	Gly	Asp	Lys	Glu	Lys	Cys	Tyr	Pro	
	435					440				445					
Pro	Ser	Pro	Pro	Pro	Val	Ser	Lys	Gly	Ile	Glu	Val	Thr	Ser	Trp	Thr
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Ala	Asp	Ala	Ser	Arg	Gly	Leu	Arg	Phe	Ile	Val	Tyr	Asp	Leu	Ala	Gly
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Asp	Glu	Ser	Tyr	Glu	Val	Ile	Gln	Pro	Phe	Phe	Leu	Ser	Pro	Gly	Ala
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Asp	Glu	Ala	Leu	Ala	Arg	Asp	Phe	Glu	Leu	Arg	Ser	Ala	Ser	Pro	His				
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Ser	Tyr	Leu	His	Glu	Ser	Gly	Lys	Leu	Leu	Tyr	Phe	Glu	Asp	Ser	Pro				
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 Asn Val Ala Leu Val Tyr Pro Pro Thr Pro Thr Val Ile Ser Pro Cys  
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&lt;211&gt; 947

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4307

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 Ile Ala Gly Leu Ser Gln Gly Pro Ser Leu Gly Ser Thr Gly Ser Ser  
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 Lys Asn His Met Ala Val His Tyr Asn Lys Ile Leu Ser Ala Lys Ala  
 50 55 60  
 Ala Val Asp Cys Ser Val Pro Val Ser Val Ser Thr Ser Ile Lys Tyr  
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 Ala Asp Gln Gln Arg Arg Glu Lys Leu Lys Lys Glu Leu Ala Gln Cys  
 85 90 95  
 Glu Lys Glu Phe Lys Leu Thr Lys Thr Ala Met Arg Ala Asn Tyr Lys  
 100 105 110  
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 Ser Phe Ala Arg Ser Leu Val Pro Ser Ser Glu Arg Leu His Leu Ser  
 145 150 155 160  
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 165 170 175  
 Ser Ser Ser Pro Ser Ser Val Asp Tyr Ala Ala Ser Gly Pro Arg Lys  
 180 185 190  
 Leu Ser Ser Gly Ala Leu Tyr Gly Arg Arg Pro Arg Ser Thr Phe Pro  
 195 200 205  
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 Thr Ala Glu Thr Lys Asn Met Thr Asp Ser Glu Met Asn Ile Lys Gln  
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